

The bleepers philosophers: is there a place for academic "ethics advisors" in hospital wards and casualty departments? Jon Turney looks at how Britain might join the US in subjecting MEDICAL ETHICS to academic scrutiny (page 10)



Few subjects stirred more prejudices in the Victorian period than BIRTH CONTROL. In the concluding part of our feature on demography and population, Andrew Hinde looks at the impact of the Neo-Malthusians on 19th century England (page 18)

The academic division of labour—among teaching, research, administration—still makes an overall strategy for and assessment of higher education deeply problematic. Tony Beeher examines the issues behind the UGC's new RESEARCH FUNDING strategy (page 16)

Is science concerned with TRUTH or rather with the processes by which we believe one "truth" and dismiss another? H. M. Collins looks at the new metascience and the questions it poses for our confidence in scientific certainty (page 14)

In between nature and history lies ANTHROPOLOGY. Different schools and exponents put the stress in different directions. J. D. Y. Peel reviews two new studies which illustrate the variation in approach (page 17)

|                             |       |
|-----------------------------|-------|
| Home news                   | 1-7   |
| Patrick Nutgens             | 2     |
| Letters to the editor       | 2     |
| Don's Diary (William Tobin) | 4     |
| Union View (NUS)            | 7     |
| Overseas news               | 8-9   |
| Union View (AUTNZ)          | 9     |
| Articles                    | 10-16 |
| Column (Bernard Crick)      | 14    |
| Books                       | 17-21 |
| Noticeboard                 | 22    |
| Classified advertising      | 23-27 |

## NEXT WEEK

Richard Bessel on big business and Hitler  
A polytechnic for Dorset?  
Postwar Japan; and the division of Korea

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### An Essay on Education II

## The endless revolution in schools

Still the sharpest image of the divided world of education after almost a century is Thomas Hardy's description in *Jude the Obscure* of Jude's first sight of the distant spires of Christminster (Oxford) from the bleak Berkshire stricken home. Already in that first glimpse, and the lines that describe it, the rest of the story is contained—the hopelessness, the vanity, the failure of Jude's ambition. The distance between Jude's world, the world of rural poverty of late Victorian Britain, and the depths of agricultural depression in which the village schools where Sue Brideheads taught struggled for a secure foundation, and the world of Jowett's Oxford in the middle of its passage from Barchester to *Glittering Prizes* was too great for all but those with the greatest determination and the best luck to travel. Jude, like every man, had insufficient of either.

When it was first published in 1896 *Jude the Obscure* was denounced as an obscene work for reasons that have lost any potency in the late 20th century. Yet today it remains a shocking book; its bleak story of unrelenting hope, frustrated ambition, social failure and finally moral degradation is too dark even for the present age. Obscurity, failure and the other elements in the book's message are just as unpalatable to us as they were to the most naive Victorian enthusiast for progress.

Even within the narrower frame of education the thoughts provoked by *Jude* are sombre ones. After all Christminster is still there, not so very much changed. The Jutes of today may have a closer view of its spires, from the council estates of Copley rather than those distant downs, but it has not changed so very much either. This is despite a century of reform in which the dominant preoccupation has been to reduce these ancient divisions, to create a common system of education that embraced both the Christminsters and the board schools and to create a united profession of teachers that included both the indolent dons and the isolated Sue Brideheads.

So much of this generous project has been achieved. But these advances are not enough. The old ghost of Jude probably haunts those who struggle to abolish the divided world of education more than those who are content to see it continue. The incompleteness of the educational revolution is taken as proof that it can never be completed. Jude's ghost is less likely to shock the fortunate than to confirm their belief in a settled inequality. How much happier Jude would have been if he had never travelled to Christminster—that is the insinuating conclusion that many will draw. Reformers therefore cannot afford to falter; they must exorcise Hardy's gloomy ghost.

The surest advance has been made to primary schools. The progressive pattern conceived in the 1940s and mandated in the 1960s command system divided by sharp controversy of amiable agreement, among politicians, parents, teachers and even children. Mixed-ability teaching and multiracialism flourish without serious challenge.

Even the difficulties that primary schools do face seem to be common. Some people complain that older children are not sufficiently stretched and demand the more systematic introduction of homework or French, but middle schools for 9 to 13-year-olds which could help to introduce this added rigour have not proved to be popular (the most common complaint is that they extend a "primary" rather than introduce at an earlier age a "secondary" environment).

At the pre-primary level there has been a more significant failure to develop nursery schools. This has been brought about by the shortage of

able reluctance of teachers to become "childminders", and a social conservatism which holds that more comprehensive child care undermines the institution of the family, and which on a different issue and at a different age has its most extreme form in Gill-lickism.

There are several possible reasons for this surprising lack of controversy about the progressive arrangement of the first seven years of compulsory education—more than half the total. The first is that the radical challenge to academic and selective secondary schools presented by the growth of "extended" elementary schools, the first attempt to establish comprehensive schools based on modern practical values, was defeated in the early years of this century. This made it certain that when this challenge was renewed it would not come from below.

The political quietism of primary education was reinforced and its residual activism further reduced after 1944 when compulsory education was extended to the secondary stage. Future battles would be fought out between the different components of and competing traditions within secondary schools. Finally in the 1960s the abolition of secondary selection removed the shadow of the 11 plus which had lain over the last years of primary education. But maybe the most convincing reason is also the most simple. The break between primary and secondary education must be maintained in the development of children, or the conventional adult interpretation of that development even after Freud, a break between childhood and adolescence.

The real battle is over secondary schools—or so it seems. For the pattern of comprehensive schools established in the 1960s is not under serious challenge. Ninety per cent of all secondary pupils are now enrolled in them. An irreversible change has taken place in the pattern of British education; the future may bring new types of comprehensive but it will not bring the open restoration of selective schools, even the covert exhumation of secondary moderns within comprehensive schools or the pre-1960s training of young or less able 14 and 15-year-olds. The retreating roar of a rear-battle still in doubt.

If the battle for the comprehensive principle has been won, neither are the detailed arrangements for the organization of secondary education the source of the visible controversy. Maybe 20 years ago anxious parents as well as Tory feared that an inflexible pattern of gigantic comprehensive American high schools with all imposed problems, was about to be imposed nationally. But the comprehensive school has shown itself a highly adaptable mould. Big schools had already fallen out of fashion before falling rolls forced a rethink on organization. Mixed-ability teaching, setting, even streaming have all found a respectable place in the new comprehensive tradition.

Less is heard today of "blackboard jungles", an early disciplinary problems have been overcome by the reassertion of more traditional attitudes to pastoral care. Even the idea of a secondary education stretching from 16 to 19-year-olds, the emergence of a more coherent tertiary sector with the idea of general tertiary schools which might then be left to enjoy the apolitical progressivism that marks primary education. But in any case the idea that it is a broad church.

The real areas of controversy about comprehensive schools revolve around two points. The first is academic achievement. The knee-jerk view of comprehensive schools is that they are a

pupils compared with the old grammar schools and encourage a kind of mass to be the contrary seems to be the case. Comprehensive schools have competed rather well with the old grammar schools in terms of the academic achievement of their able pupils, as the rising graph of A levels testifies. But they have offered the less able and the less motivated, today's Jutes or Sir Keith Joseph's bottom 40 per cent, a less satisfactory deal (not the truly disadvantaged, socially or academically, whom comprehensives serve well).

The second is the social message which comprehensive schools, despite their consensual caution, carry to the British has remained. That message seeks to go beyond the formal equality of citizenship which (nearly) everyone has no choice but to accept in the 20th century, to a richer social equality. This embraces not only a cultural equality that extends beyond the temporary solidarity of youth but also an equality of social and economic opportunity, because schools play such an important part in forming the division of labour and so the hierarchy of society. To many that is a difficult message, and to a few an unacceptable one.

Uneasily for the former and defiantly for the latter, private education offers an escape. In the last generation private education has suffered a paradoxical fate: never more important but never more marginal. The slippage of language reveals this change. As late as the 1960s the misleading but also comforting term "public schools" was still common, and not just as a proper description of the top private schools. Maybe in this usage some sense of superior but still intimate association with the rest of education. Today the favourite term is "independent schools" and those few grains of public duty have been lost. In the late 1960s a window of opportunity for a reinvigorated relationship between public and "public" schools opened, and quickly closed. Only a few more perceptive private school heads even noticed its quick flash of hope.

The shape of the teaching profession has changed as much as the pattern of schools since the days of Sue Bridehead (probably pre-1870 despite the much later publication of *Jude*). It has ceased to be a two-class profession, grammar school teachers still with close links to the universities in which nearly all of them were educated, and a lower stratum of minimally qualified board school teachers oppressed by a mean "payment by results" regime and an inquisitorial Inspectorate. Cynics of course will say that all teachers are now in the same category, the bottom one. But that grossly underestimates the professional gains of the last hundred years.

A few groups of teachers remain outside this unity. Those in independent schools find themselves in an even more impenetrable ghetto: university succeeded in establishing a higher professional identity but are finding it difficult to maintain in the second half. But the bulk of school teachers now share a fundamental professional unity and secondary modern and grammar and EBD graduates and teachers with postgraduate certificates are much more united. The contrast between the academic values of "upper" teachers and the practical values of "lower" teachers has also been softened out of sharp recognition. But teachers have not been able to establish an absolutely secure professional status. The underdevelopment of English schools in the 19th century and the power of the public schools

of the national elite have conspired to a cultural memory in which teachers are not treated with all the respect they deserve. Such institutional inferiority is not of course a problem in Scotland with its traditions of "dominie" and the democratic ethos in Wales where teachers enjoy ministers have made such a contribution to the recovery of Wales.

Unlike university teachers, teachers have not been able to secure the corporate independence of the institutions, and unlike doctors have been unable to secure a within public institutions. Of the both contrasts can be exaggerated. Teachers, and certainly head teachers, are easily the most influential group determining the educational climate of schools, whatever the small part the 1944 Act may say about the powers of governors and of local education authorities. The professional autonomy exercised by the individual classroom teacher may not seem as awesome or as free as the clinical freedom exercised by a surgeon in the operating theatre, but it is of the same order and has the same consequences.

So it may be that while teachers are unangered or undemoralized by their present undervaluation by society (an indisputable underpinning), they are frightened by the extent of their effective freedom. This fear is expressed through unrenewable, less they are unrenewable, demand greater accountability. But here is an interesting contrast between the attitudes of local and central government. The former which actually runs schools generally respects the professional independence of teachers, except in confined areas like "teacher son" policies on equal opportunities, multiracialism and indirectly through administrative actions such as the appointment of head teachers and the organization of the pattern of schools. The latter which runs schools is much more twitchy about teachers. The whole story from the Board through the Ministry to the Department of Education (and Science) and the other Whitehall departments with a growing stake in education has been one of accelerating intervention.

But again it is probably wrong to jump to categorical conclusions. The traditional partnership between central and local government has always been a bit of a myth, its ambiguity delightfully summed up in that opaque phrase "a national system locally administered". All the decisive and beneficial initiatives, from the 1870 Act to the comprehensive reorganization of the 1960s, have come from the centre. We may not like some of Sir Keith's present hobby-horses, but it is difficult to argue that they are unproductive. Yet all the time British education is bottom-heavy system. Teachers are bullied and underpaid, or praised and coddled, but in either case their actual responsibility for the quality of schools remains unimpaired. All the White Papers in the world and the Acts of every Parliament cannot change that.

So a century after Jude first saw Christminster's spires, what has been achieved? Where were two educational nations, we have become one, despite the unjust variations in opportunity that persist. Of course, the stationary emotions of a 19th-century schoolmistress like Sue Bridehead, or the "new Jerusalem" hopes of the 1940s, or the more secular ambitions of the 1960s reformers remain unsoftened. But that is how it should be: the educational revolution is an endless revolution.

Peter Scott

Laure Taylor will be back in

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## Research party calls for £60m supercomputers

by Jon Turney  
Science Correspondent

Britain should invest £60 million in supercomputers over the next five years to keep university researchers abreast of international scientific competition.

This ambitious recommendation comes from a working party on future facilities for advanced research computing reporting to three funding bodies—the Advisory Board for the Research Councils, the Computer Board for Universities and Research Councils and the University Grants Committee.

There are only two supercomputers currently available—in Britain for university users, one each in London and Manchester. They are rapidly being overtaken by new generation machines up to 10 times faster.

The new report, from a group chaired by Professor John Forth of Warwick University, says progress in many important research programmes is being hindered by poor access to high-power number crunching. And the group warns that big investments in new machines overseas, especially the United States, may lead to British researchers falling behind in areas where they now lead the field.

Important applications of the fastest machines include quantum physics, nuclear physics, protein crystallography, astronomy, oceanography and climatology, and simulations for engineering design.

The report also points to increasing scope for industrial applications in aerospace, energy, electronics, car and

drug companies. It says the limited access to advanced computers when opportunities for use are expanding is creating a desperate situation.

The new investments proposed are:  
● a new machine from Cray Research—the leading American manufacturer of supercomputers—to be installed at the Rutherford Laboratory in 1987, cost £15 million;  
● a second new Cray, or equivalent, when the next step-up in power is on offer, around three years later, costing £20 million, and a rolling programme of new purchases thereafter on a three-year cycle;  
● a five year programme to provide less powerful advanced computers at

other centres, costing £16.5 million; ● beefing up the existing academic computing network, JANET, with high-speed trunk lines and local area networks, at a cost of £8 million.

As interim measures, the report asks for a second current-generation Cray processor at the University of London Computer Centre, and says the ABRC should earmark £2 million next year to buy time on a more powerful machine run by Cray itself to service a supercomputer bureau in the UK.

The whole programme would be overseen by a new Advanced Research Computing Advisory Body, reporting to the ABRC through a director. The recommendations bring science policy advisers squarely up against the problem of funding large capital investments when the Government's spending on research is losing value.

The report argues that supercomputers are relatively cheap for the power they offer, and are cost-effective in serving many users. But the group emphasises the cost of its proposals is beyond the means of individual research councils or the Computer Board. It calls on the three main funding bodies to adopt a national policy to meet the new demands.

The working party found strong demand for access to supercomputers from all scientific disciplines, and says most scientists and engineers see computation and information science as an essential complement to experiment and theory.

Future Facilities for Advanced Research Computing, published by the Science and Engineering Research Council, Polaris House, North Star Avenue, Swindon.

## Four architecture schools face the axe

by John O'Leary

Three polytechnics and one university will lose their schools of architecture if the recommendations of a report released this week are implemented. Two further mergers are suggested in a plan to cut intakes to architecture courses by more than 18 per cent.

Queens University, Belfast, and Huddersfield and North East London polytechnics would cease recruiting students to Part 1 courses in 1986 and to Part 2 courses not later than 1989. The Inner London Education Author-

ity would be asked to close one of its four schools at Central London, North London, South Bank and Thames Polytechnics.

In Scotland, Edinburgh University would be asked to consider collaboration or a full merger of its school of architecture with Strathclyde University and Glasgow School of Art would be considered as part of a further review of provision in 1987.

The report has been produced by a five-man joint working party appointed by the National Advisory Body, the University Grants Commit-

tee and the Scottish Education Department. It was established early this year after another ramshackle group, chaired by Lord Esher, recommended cuts of 15 per cent in Part 1 courses and 30 per cent in Part 2 to match estimated job opportunities.

The new group, whose task was to put forward a detailed distribution of places, has varied the totals slightly, recommending an intake of 1,200 students for Part 1 (a 17 per cent cut) and 700 for Part 2 (20 per cent down on present recruitment but 30 per cent below the expected peak in two years' time).

## Research decline 'levelling off'

Fears of a decline in Britain's research output are contradicted by the latest figures on our share of world scientific publication.

A new analysis from the Science Policy Research Unit at Sussex University shows our contribution to the world's scientific literature is levelling off in 1981 and 1982, after a steady fall in the 1970s. However, the SPRU authors caution that this may only be temporary.

A paper published yesterday in *Nature* follows up a report from SPRU last year which gave figures for Britain's share of the research papers recorded in a database maintained by Computer Horizons Inc for the US National Science Foundation.

The first report was based on figures from a constant set of 3,000 journals between 1973 and 1980—and showed a drop of around 10 per cent in the overall share of papers from British scientists. The figures have been widely cited in science policy debates this year as evidence that research funding is too low to maintain Britain's scientific standing.

The new paper, by John Irvine, Ben Martin, Tim Peacock and Roy Turner,

## How I bought a 'degree' for just £150 in one hour

by Adriana Caudrey

It is possible to obtain a degree while-you-wait from North West London University for £150. The transaction, conducted in the front room of a suburban house in Kilburn, North London, lasted just one hour.

A colleague and I posed as prospective "students". Our academic salesman was a Dr Sydney Lawrence, who signs himself as president of the North West London University. If the title suggests a connection with London University, that is not accidental.

Dr Lawrence issued one of us—who assumed the name Patricia Marie Nolan—with two degree certificates for a bachelor of arts in philosophy, specializing in "special parchment".

Dr Lawrence—sometimes known as Commander Dr Sir Sydney Lawrence, or as Minister of Justice—told us jokingly that the credentials would cost him £300. On learning we had brought £150 cash and could afford no more, he accepted this.

The remainder would be paid out of their charitable funds, he told us. "I like to help people." He said that the charity, associated with the university, He also issued us with a certificate of



Part of the scroll of "North West London University", motto 'Dum Vivamus Vivemus'

giving a membership number, enclosed in a plastic holder.

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Police escort a student off the Witwatersrand campus

## Violence at peace demo

by Carolyn Dempster

A peaceful demonstration by 1,500 University of the Witwatersrand students in protest against the state of emergency declared by the South African authorities turned into a violent confrontation with police early this week.

After a midday protest meeting held indoors on Monday, students staged a march and were met by riot police on the perimeter of the Johannesburg campus.

According to witnesses, the students, when faced with the human police chain barring their path, sat down and displayed peace signs. After issuing a second order to disperse, police barely allowed the students to stand before charging, using whips and tear gas to scatter the crowd. Forty students were injured and eight were arrested.

At least one of the students, Firoz Cachalia, was punched and beaten before being bundled into the back of a police truck.

Following the clash, a second protest meeting, attended by nearly 2,000 students and addressed by the university vice-chancellor, Professor Karl Tober, was held on the campus

on Tuesday. Professor Tober reassured students that the state of affairs had already progressed "too far", and announced a general assembly which was due to be held today.

A second demonstration, much narrower, avoided a repetition of Monday's events when student representative council president Grant Rex approached the waiting body of riot police to explain that the protest was peaceful and would only be staged for an hour. A small bomb was planted in a basement lift in the university's administration block, exploding at 3 o'clock on Wednesday morning. Nobody was injured and no one immediately claimed responsibility.

Wits students have pre-empted the university general assembly and called their own. Mr Rex has remarked on the increase of involvement on the part of white students, most of whom in the past have adopted an apathetic and distanced approach to overtly political protest action. The composition of student gatherings over the past week—60 per cent black and 40 per cent white—was an encouraging sign of the rise of non-racism on campus, he said.

This list would be added to extensive paperwork he kept on his students, and would also be stored on computer, he said. We then had to invent a title for a research thesis. We suggested Joyce, but it was clear that Dr Lawrence had not heard of him, because he asked "just Joyce?"

First Dr Lawrence offered us a degree from the College of Applied Science, London but we explained we wanted a university degree. We were in luck, he told us, because he happened to have some papers "ready to go out" to another student, and we could have those.

He said we needed papers that had already been signed by the commissioner for oaths, and by the registrar, one Lord Bishop Ramsay DD. This Ramsay's first name is Malachi, not to be confused with the former Archbishop of Canterbury.

Dr Lawrence told us that some of the upstairs rooms were used for "advanced studies", and also Freemasons' lodge meetings. In one of the rooms he showed us a leather book full of colour photographs of teeth. These were examination papers for the dentistry students, he said. He claimed that this was a four-year course.





# Letters to the editor

## The market as Mecca

I see in *The Times* that a Dr Shihnam Khoshbin, a leading American neurologist, has revealed at a conference in Boston that van Gogh was suffering from Geschwind's Syndrome, one of whose principal symptoms is hypergraphia - that is, an endless compulsion to write, draw, paint and produce graphic material. He probably contracted it in infancy. I assume that at that time there was no known cure.

After many painful years I now realize what it was that afflicted me in my early teens and recurred thereafter at irregular intervals. I remember the moment well. Although I had been growing up in an artist's studio, I had never taken any interest in his work or in drawing, being far too preoccupied with other things at school. Then one day I saw, in a moment of revelation, his watercolours lying on a table beside a drawing pad.

It was a sunny afternoon. I took the paints, a brush and a jar of water, walked off down the hill and made a drawing of a house at the bottom of the hill. To my surprise it looked rather good. I caught the disease instantly and got into a state of almost uncontrollable excitement. For several days I could not stop drawing buildings. Then I started on trees and shrubs, knights in armour and a few dogs and horses. The knights in armour must have been in books unless by that time I was so crazed that I could see them in the garden. I stole another sketchbook and drew on page after page. The excitement was indescribable. The compulsion irresistible - a bad case of hypergraphia.

What brought it all to an end was going back to school. A sane and balanced schoolmaster dampened my enthusiasm and hauled me back to sanity. Latin prose composition and a passing acquaintance with the more respectable plays of Shakespeare are all you need in a sound English education, he insisted, "and since you will have to cope with mathematics and physics, about which frankly I know nothing whatever, you will have more than enough to occupy the growing mind."

It was just as well that I took his advice. Otherwise I might have gone on drawing trees and fields, then taken to painting boots and ended by cutting off my ear. I had moments of regression and locked the door of my study and made drawings during the night. But the climax of the disease was over.

The value of the experience was that I learned to recognize the onset of hypergraphia in other people and was able to soothe them in moments of crisis. Some people never recover, even after spending years at an art school, which ought to allay the fever and effect a permanent cure. In a few areas of the polytechnic the disease is still rife. All my efforts to achieve a balanced curriculum have come to nothing; they are still drawing and painting.

My own partial cure came with the onset of another disease - hyperloquacity, that is, an endless compulsion to talk and ramble and even occasionally to listen. There is no known cure. But the vacation is on us. I see my watercolours and a pad waiting. For a few weeks I shall give in to hypergraphia and then come back to my cure.

Patrick Nuttgens

Sir, - Professor Marsland's letter on the alleged anti-business bias of education (*THES*, August 9) exemplifies many of the defects of such accusations that you highlighted in your editorial (*THES*, July 26). In particular, it is grounded in the ideological equation of wealth creation and the market. In the current climate of hostility to higher education, manifested in increased pressure for it to be evaluated criteria, this is an important matter. Marsland's study of the alleged bias in the teaching of sociology seems to assume that "enterprise" is only to be found in "business", that wealth creation occurs only in "business" and "industry", and that "sales" and "advertising" have something to do with wealth creation, rather than with its circulation and distribution. That the teaching materials of sociology reveal a critical desire to elaborate these distinctions, and even to concern themselves in addition with aspects of social life that have nothing directly to do with these economic issues, does not constitute evidence of "neglect and antipathy".

As to my own discipline, economics, the most commonly heard complaint against it is that it teaches a much too

uncritical theory of the market. But here David Marsland's letter seems to have abandoned argument altogether in favour of misleading innuendo. The 364 senior economists to whom he refers in fact made no collective comment on the merits or otherwise of enterprise, market forces and all that - probably because they espouse at least 364 distinct views on such matters. What they did manage to agree on was a view of what constitutes the "economic realities" facing the UK different from that which appears to inform the macroeconomic policies of the Government. They concluded that these policies were therefore far from conducive to wealth creation. This is a controversial position, but it does not constitute anything that could be construed as anti-business bias.

But it is not until the final paragraph of David Marsland's letter, in his subscription to the fashionable definition of the market as the wonder cure-all for our economic and social ills, is revealed. Market mechanisms certainly seem to have some efficacy in the regulation of certain kinds of economic activity. They have undoubtedly been a ubiquitous and increasing influence on our society for at least 200 hundred years. And more recently, for at least

10 years, UK governments have actively attempted to increase their impact on our affairs. Clearly a set of phenomena worth studying, then. With regard to wealth creation, however, this widespread, increasing and politically sanctioned influence of market forces has left us in a situation in which millions of potential wealth-creators are unable to find any opportunity to deploy their enterprise and industry to the production and distribution of the goods and services that are needed. A *prima facie* case for a critical analysis and teaching of the wonders of unaided market resource allocation, one might think.

Under these circumstances I would be extremely worried that the idealization of market forces, espoused by the present Government and by Professor Marsland, will legitimate their infiltration into areas of life in which their efficacy is, to say the least, unproven. Within higher education, a predictable and already discernible consequence is the tendency to self-censorship of anything that might be construed as sacrilege against the new god-head - the market.

Yours sincerely,  
MICHAEL J. WILLIAMS,  
59 Queens Road,  
Thames Ditton, Surrey.

## Library spending

Sir, - The opening paragraph of article of Carolyn Dempsey on library spending (*THES*, August 9) is misleading. The Standing Conference on University Libraries (SCUL) does not claim that "or increase library expenditure in 1981-84". Briefly the facts are: 1. Overall the libraries' share of universities' expenditure fell during the period; 2. Some libraries maintained or fell in real terms. It follows in terms: 3. Over the period university expenditure by libraries also fell; 4. Inflation in library costs, books and periodicals, was much greater than inflation in other university costs. So library purchasing power reduced even more.

To be fair, much of the comments sensibly on the problem of university libraries in trying to maintain support for teaching and research. The great majority of university libraries are certainly worse off than they were in 1981.

Yours faithfully,  
ARTHUR DAVIES,  
Librarian, University of Lancaster,  
Chairman of SCUL's Ad-hoc Committee on Recurring Expenses.

Sir, - Curs should be taken in ending the SCUL statement about the effect of automation on staffing university libraries.

If my own library is any guide, I load on junior assistants has been lightened. However, my technical services, who once spent most of his time directing the work of the cataloguing department, now find himself spending between half and thirds of his time on computer related activities, including discussions on new software, attendance at planning committees, discussions with computer reps and detailed study of the literature.

Because of the pace of change, we have lifted the burden from our young people, and are employing fewer of them, and are imposing much heavier burdens on our senior and most expensive professionals. The benefits to our readers have been substantial: the cost in terms of youth unemployment and senior level tension has been very considerable.

Yours sincerely,  
NORMAN W. BESWICK,  
Librarian,  
University of London,  
Institute of Education.

## Paisley support

Sir, - An absence in Connemara while my *THES* languished on the door mat has meant that I have only now seen the letters of Messrs Cosin and Osborne in connection with the comments of Steve Bruce and myself on the success of Paisley (*THES*, July 5). A brief article scarcely permits justice to be done to the complexities of Northern Ireland history and politics. But a few words of reply may be in order.

Far from it being the case that Steve Bruce and I regard support for Paisley as irrational, we see it as virtually the only logical position for many Protestants in the foreseeable future, and a perfectly rational response to the persisting threat to their social and cultural dominance in Ulster. Contrary to Mr Cosin's assertion, devolution seems to have little causal relation to Paisley's success, since he rose to prominence in devolved Northern Ireland, and then went on to become the most popular Protestant politician after the ending of devolution with the prorogation of Stormont.

Mr Cosin's views about trade unionism are utopian to say the least. British trade unionists have no more understanding of the fears of Ulster Protestants than anyone else, and this fact was clearly marked by the efforts of Trades Union Congress leaders to



break the Ulster Workers' Strike in 1974. His belief that if the Labour Party could recruit in Ulster, the confessions would unite in the struggle against Thatcher seems equally ill-founded. The Northern Irish Labour Party only ever achieved a maximum of four Stormont seats. Moreover, with much of the British Labour Party committed to the reunification of Ireland, the prospect of it securing many Ulster Protestant votes seems slight indeed.

Mr Osborne makes a more telling point. Protestants still retain considerable differentials in employment compared to Catholics. We argued that differentials had been eroded. Erosion is not the same as disappearance.

Moreover, even if Catholics had only as many of their community unemployed as Protestants, some would still challenge the legitimacy and right to survival of the Northern state. While with traditional Loyalty of the kind represented by Ian Paisley. While Protestants may have marginal economic advantages over Catholics, it is the effort to avoid becoming second-class citizens in a United Ireland that explains allegiance to Paisley, far more than the effort to retain Protestant jobs.

Yours faithfully,  
ROY WALLIS,  
Professor of sociology,  
Queen's University, Belfast.

## Unesco threat

Sir, - I must congratulate your publication for its consistent, impartial coverage of the issues arising from the Government's threat to withdraw from Unesco at the end of this year.

None of the newspapers which have so readily carried anti-Unesco reports evidence of Bill Dodd to the select committee reviewing reforms within the UN Educational, Scientific and Cultural Organization. Yet, as the UK member of Unesco's executive board, his views must be of particular significance.

Of newspaper readers, so far as I can judge, yours and those of *The Times Educational Supplement* alone will know Mr Dodd's views that there have been reforms within Unesco and budgetary fronts, sufficient to give ground for "guarded optimism". Though he believes a final decision must await the outcome of the Sofia conference in November. A point of his which did not fully emerge in your report was the eagerness with which American block representatives have moved into the vacuum created by the American withdrawal and are no of our own.

Yours faithfully,  
MALCOLM SKILBECK,  
Chairman of the Keep UK in Unesco Campaign,  
3 Whitehall Court,  
London SW1.

## Left and right

Sir, - Having read Fred Inglis' piece (*THES*, July 26) with much admiration and pleasure I must nevertheless point out that the corruption of "decent and honourable classrooms" to which he refers has come overwhelmingly from the left rather than from the right, even if one leaves out of account regimes in which education is overtly politicized. For higher education in this country the process was sufficiently exposed in *The History Man*.

Now, to howls of rage from the para-educational establishment, Roger Scruton has performed the same service for schools revealing, in a recent pamphlet, a strange sub-world in which an "English teacher" can see children "the righteousness of revolutionary violence against fascists and imperialist tyranny".

Yours faithfully,  
PATRICK WINTERTON,  
25 Cornberton Road,  
Barton, Cambridge.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Yours faithfully,  
F. J. E. HURST,  
72 Ballywillan Road,  
Portlaoine,  
Co Antrim.

## Pillow talk

Sir, - On the day of No Radio News a welcome and unexpected bonus for Radio Elrann listeners was the sound of Laurie Taylor, by his own admission still in bed, holding a telephone conversation about it all with a charming lady in the Dublin studio. "Just keep on talking," she urged unnecessarily, and he did.

When he returns from holiday, I hope you will persuade L. T. to record a similar type of conversation between Professor Lapping and, say, Maureen in her lonely office. We need a little light relief, at this time in this particular year - as I am sure Maureen does also.

Yours faithfully,  
F. J. E. HURST,  
72 Ballywillan Road,  
Portlaoine,  
Co Antrim.

## Poor relations

Sir, - I recently attended a scientific conference in the United States which was, for the topic, the principal conference of the year. Out of the 28 delegates only five were from the UK. In contrast 10 were from France, 10 from West Germany and 12 from other European countries. This is not because the UK has little activity in this field, indeed two of the plenary lectures were by UK delegates.

I expect this pattern has been repeated many times in recent years. I am afraid, another reflection of the shortage of funds for mainstream science, and other academic studies. In this country and shows that unless one is an invited lecturer with expenses largely paid from conference funds, it is extremely difficult to get to major conferences particularly if they are out of Europe.

How are we expected to keep our younger scientists abreast of the latest developments? They can, of course, read the scientific literature which means they are only two years out of date. Perhaps as important, should not be able to show off the excellent work that does persist in a declining number of centres?

Yours faithfully,  
J. N. MURRELL,  
Pro-Vice-Chancellor (Science),  
Sussex University.

## Closure staff demand explanation

by Patricia Santinelli

Hertfordshire College staff and students are seeking an urgent meeting with the county's education officer following his letter to the National Advisory Body recommending closure of the institution.

At the end of last month, the NAB board decided to re-open all institutions threatened with closure with the exception of Hertfordshire College. It recommended the end to all teacher training provision in the county, having accepted the closure of the college but rejected the transfer of courses to Hatfield Polytechnic.

The college campaign committee chairman, Mrs Jean Clerk, says staff and students are totally devastated by the board's decision. They want Mr Donald Fisher, the county's education officer, to explain the last paragraph of his letter in particular.

This said: "To sum up, the authority would wish to close the college of higher education in September 1986 and to transfer the education courses to Hatfield Polytechnic, subject of course to an appropriate target intake being allocated for initial training. My hope is that the board will see this as the best solution to a difficult problem."

Mrs Clerk said: "We found this paragraph very puzzling considering the supportive tone of the rest of the letter. It seems to want to kill the college off, but this cannot be his intention because it is not the policy of the council or academic board which is set out in the letter. Therefore we are giving him the benefit of the doubt".

The campaign committee is to press the NAB committee to reject the board's decision on the grounds that Hertfordshire is being singled out as a sacrificial lamb. It plans to lobby the committee's meeting on September 2. In addition, Mrs Clerk says the committee has written to all heads of schools in the county informing them of the latest developments and asking them to reiterate their support for the retention of the college. A letter will also go to the Secretary of State for education and to Mr Peter Brooke, under secretary of state for higher education to ask them to reject the decision.

The National Association of Teachers in Further and Higher Education is writing to the NAB committee next week to ask them to defer a decision on the closure of the college until the 1987/88 major review of advanced further education takes place.

Natthe pointed out that it seemed ridiculous to take such a major decision now about a small college, and there appeared to be political overtones to the proposed closure.

## Sanctions ballot

Officials of the National Association of Teachers in Further and Higher Education have voted to relax sanctions to allow them to make preparations for the union's delegation to next month's Trades Union Congress.

The officials, members of the Association of Scientific, Technical and Managerial Staffs, decided to boycott the conference after being excluded from the Nattie delegation. The Nattie executive meets at the end of the month and will be asked to approve a commitment to exclude at least three officials in next year's delegation.

## Poly proposes single validating body

A single validating body for universities and public sector institutions of higher education has been proposed by Manchester Polytechnic's governing body as a means of ensuring comparability of standards on a national basis.

The call for the establishment of a transitory body is made in a letter from the governors to the Secretary of State for Education and Science, Sir Keith Joseph.

In it, the governors voice concern over the "proliferation of validating bodies" liable to emerge if the recommendations of the Lindop Report are adopted, adding that this would militate

## Rise in overseas figures

by Peter Aspden

The number of overseas students applying to, and being accepted by, British universities is steadily increasing, while fewer are enrolling in other institutions of higher and further education.

Latest figures published by the Universities Central Council on Admissions show that 17,272 overseas students had applied for undergraduate entry in 1985 by the end of March - a rise of 10 per cent from last year's corresponding figure of 15,694.

The rise in applications is likely to be reflected by a similar rise in acceptances (5,663 in 1984), which would continue the upward trend in universities over the last few years.

A report of the Commonwealth Standing Committee on Student Mobility shows that total overseas

enrolments at universities - including postgraduates - increased from 31,000 in 1982/3 to 32,200 in 1983/84 and an estimated 33,600 in 1984/85.

But the rise in university numbers seems to be at the expense of other institutions. Advanced further education in polytechnics and elsewhere fell from 15,300 in 1982/83 to 13,800 in 1983/84 and an estimated 12,500 in 1984/85.

Non-advanced further education also continued to fall from 8,100 in 1982/83 to 7,800 in 1983/84 and less than 7,000 in 1984/85.

Taking higher and further education as a whole, the committee's figures show that the total number of overseas students has dropped by more than 30,000 in the five years since full-cost fees were introduced in 1980.

The success of universities in reversing that decline over the last three years reflects their intensive efforts to recruit more students from overseas. Keele University, for example, has increased its number of overseas students by 95 per cent since 1981.

Better, and more widespread, publicity has also been given as the reason for an increase in the number of applications for overseas research students awards, which rose from 2,370 to 2,570 for the coming academic year. The number of awards offered has risen from 933 to 1,009.

The annual value of an ORS award, under the scheme set up by the Department of Education and Science in 1979, is the difference between the tuition fee for a home postgraduate student and the full-cost fee which is charged to an overseas student.

## Report urges new tack on mobility

by John O'Leary

Commonwealth education ministers, who meet in October to review progress on stimulating student mobility, will be asked to approve new measures to help developing nations following their failure to persuade Britain and other countries to stop charging higher fees for overseas students.

The fourth report of the Commonwealth Standing Committee on Student Mobility, published this week, reaffirms the case for charging overseas students at least not full cost, but recognizes that economic pressures will continue to restrict this.

As a result, the committee, chaired by Sir Roy Marshall, the retiring vice-chancellor of Hull University, envisages more students studying in the

less developed countries, where costs are lower. And the report sets out a blueprint for sustaining and developing centres of excellence throughout the Commonwealth.

The ministers meeting in Sofia will discuss an 11-point plan put forward by the committee designed to produce a 3 per cent increase in mobility within the Commonwealth by 1986/87. It concludes a renewed call for restraint in the setting of fees, particularly for postgraduates, and more exchange schemes and scholarships.

But the committee devotes a third of its report to new proposals for cutting down the length of time students need to spend abroad and expanding the range of subjects which can be studied in the develop-

ing nations. By greater use of preparatory courses and split-site study the committee hopes that more students could go abroad for shorter periods. Distance learning would also be encouraged and some institutions strengthened to enable them to collaborate on more equal terms with those in developed countries.

This would involve more support for libraries and staff development, greater encouragement for institutional links and further investigation of the potential value of satellites and other new technologies for higher education abroad.

*Commonwealth student mobility: a way forward*, published by the Commonwealth Secretariat, Marlborough House, London SW1 5HX.

## Research decline 'levelling off'

continued from front page

adds the next two years' figures from the same journals, and finds that "the downward trend since 1975 seems almost to have levelled off in the two years since 1980, with physics, chemistry and clinical medicine apparently registering small increases".

This finding will not help the cause of the ad hoc group of learned societies which is sponsoring the SPRU group's analysis to underpin the campaign for more basic research cash.

However, other details of the SPRU analysis indicate continuing cause for concern. There is a persistent decline in our share of citations, as opposed to publications, suggesting British papers are less influential. Figures for specific fields suggest a further weakening of our position in several disciplines with important industrial roles.

The new paper says our world publication share fell in optics (5.3 to 4.6 per cent), polymer research (6.3 to 5.5 per cent) and chemical engineering (6.7 to 5.9 per cent), in the two years to 1982.

## St Andrews appoints new principal

St Andrews University has chosen a biologist, Professor Struther Arnott, as its new principal to succeed Dr J. Steven Watson, who is retiring in September 1986.

Professor Arnott is at present at Purdue University, Indiana, where he is vice president for research, dean of the graduate school and professor of biological sciences. His own research interest is in structural studies of carbohydrates.

Aged 50, he was born in Larkhall, Lanarkshire, and attended Hamilton Academy and Glasgow University, where he studied chemistry and mathematics, taking a PhD in 1960. After 10 years with the Medical Research Council's biophysics research unit at King's College, London, he went to Purdue University.

Commenting on his return to Scotland Professor Arnott this week noted the connection of Arnotts with St Andrews and its university since the middle ages, and went on: "St Andrews is a gem of a university, very Scottish in tradition and setting, uniquely British by student population and unparochial aspirations."

"That St Andrews has chosen a Scotman, a scientist and an internationalist is quite significant. I take it to mean that St Andrews wants its native roots to be respected and protected, that it is committed to being a comprehensive university with world class reputation."

Professor Arnott is anxious not to intervene in British academic politics a year before taking up his post, but by implication referred to the Government's ideas for grading universities when he said: "Small universities cannot afford to do everything. St Andrews will therefore have to foster complementary and synergistic links with other institutions, most obviously with its distinguished younger sister in Dundee".

TESS



"I WAS WONDERING HOW THEY'D MANAGED TO CUT THE MEETING BILL!"

## In September The Times Higher Education Supplement

published a 4-page analysis of the joint statement from the University Grants Committee and the National Advisory Body regarding the basis for considering the present and future role of higher education in our society.

Copies are available at 30p each\*. Please make your cheques/postal orders payable to Times Newspapers Limited and send to:

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Priory House,  
St John's Lane,  
London EC1M 4BX

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(40)



## DON'S DIARY

### SUNDAY

A mosaic of rain driven Belfast, attending the Quaker Meeting, a calm, quiet space of time, a finding of inner repose. An afternoon of marking, of Tchaikovsky's Symphony No 4, of a family outing to the university pool. An evening of more marking, gardening, planting out hanging baskets and window boxes. Finally, the last paper, the last of the year, marked. Bed, 12.40 pm.

### MONDAY

The morning is administrative work at the University of Ulster, delivering my scripts for safe keeping, discussing points likely to come up at meetings, trying, and frequently failing, to dial through on the internet line to the campus at Coleraine 55 miles away.

I drive to the airport to get the 2.30 shuttle to London (the fare is cheaper on that one). The passengers, the luggage and the cabin crew are on board, but no pilot. Time passes. At last, about 30 minutes later, the captain appears. His transport from the hotel has failed to materialize. I wonder if the driver has gone to the junkies in Belfast for McGuigan's victory instead.

I open my post on the plane and find I am invited to referee papers submitted to an international conference I'm helping with next year. I'm pleased.

Evening. I work on a paper that I'm to give at a conference in Lancaster on Cognitive Processes in Student Learning. I'm under pressure to finish the first draft by Thursday.

### TUESDAY

Brunei University. The place is much busier than in earlier weeks. The University Grants Committee is coming on Friday. It's cold in the Centre for the Study of Human Learning where I'm working, and I keep my coat on all morning. Today, as part of my training, I interview a final year student about the learning experience he considers important. He's a student with a humanities background, studying computing and management. It sounds an interesting course.

The evening is hard slog at my paper, but it's progressing, slowly. I am presenting a detailed description of a pilot scheme I am running at Ulster which will improve the reading and learning efficiency of students in technology and business studies.

### WEDNESDAY

Brunei. The whole day is given over to working with the software programme that's been developed there on Reading to Learn. The more I explore it on the microcomputer the more impressed I am. The scheme not only enables a "learning shell" which is content-free to be put round any reading material at any level from primary to postgraduate, but it also enables the teacher to place text into the programme his/her chosen text. I shall develop a group of engineering texts for the technologists, and business texts for the business students.

After dinner, I settle down to finishing the paper, and complete it at 11.15 pm.

### THURSDAY

Today is Jarratt. I spend the main part of the day at Brunel, going over the Lancaster paper with my co-

author, Sheila Harri-Augstein. She seems happy with it.

I leave at 4.30 to make the slow trek to Central London. I am invited to a meeting of the Society for Research into Higher Education forum which begins at 6. Ian Beesley, an under-secretary from the Prime Minister's efficiency unit, and a member of the team that produced the Jarratt Report, is introducing the subject of institutional efficiency and governance.

It's an interesting meeting, enlivened by a marvellous quotation from Philip Larkin which certainly has the effect of concentrating minds: "Some 20 years ago, I fancifully proposed that English society has always included a kind of sleeping-bag for those members of the educated middle-class who didn't want to work; first it was the monasteries, then the Court, then the Established Church, and the Civil Service, now the Universities."

I discover, to my chagrin, that the decorative bow from one of my shoes has disappeared. I hunt about for it after the meeting, to no avail.

### FRIDAY

Today is Lindop. As a member of the Council for the Society for Research into Higher Education I am invited to a pre-council lunch with Sir Norman Lindop as guest speaker. His speech is thought-provoking. He is seeking to question assumptions that need re-examining. Does validation ensure standards? What does social accountability in higher education actually mean? He speaks well: his listeners respond thoughtfully; lunch runs well over time.

The council of the SRHE which follows, deals with several interesting papers. Its status and activities appear to be steadily growing. It is a well run, well managed body.

Tonight I give a small dinner party for friends. I enjoy the cooking, I enjoy the food, and I enjoy the company. The menu is consummate with sherry, baked fish with pasta shells and strawberry shortcake with yogurt. At 10.45 I am suddenly tired.

### SATURDAY

Today moves forward and backward and forward. A sophisticated pattern. Morning is chairing the education policy committee of the Association of Polytechnic Teachers: topic: the Green Paper on Higher Education. Brainstorming, lunch, more brainstorming: an exhilarating meeting.

Afternoon is Bedford College: the last reunion before the close. Two thousand five hundred old students and staff. Kathleen Tillotson and Phyllis Hodgson, both my professors, both now well retired. Kathleen her old, warm, charming self. Oxford University Press are to reprint her excellent book on the novel in the 1840s. But, said with gentle regret, with no royalty to her. I feel a spurt of anger.

The formal focus: the induction of Dr Bernard Williams as a fellow. Entertaining speeches: Caroline Barron, dean of humanities, a neat, well turned speech; Dorothy Wedderburn, principal, a spirited attack on the Green Paper; Bernard Williams a philosophical attack on the Green Paper. It will lead to a society of untutored, violent responses. Neglect the humanities and society will lose its component of "criticism with understanding."

Early evening: friends, talk, supper in the sun of the quadrangle, talk in the bar. My friend finds a copy of the magazine I edited in the historical exhibition. Surprise, and a certain shock to be counted historical.

The end is strolling through the gardens to the back gate, locked, two chairs, beside it. We rearrange the chairs, and climb out. Twenty years on, we climb out of our college. We carefully reposition the chairs. Fitter, and time, and the Green Paper.

Heather Eggins

The author is lecturer in the department of English, media and theatre studies, University of Ulster.

## Better outlook for graduates

by Carolyn Dempster

Confirmation of a big improvement in job opportunities for graduates came this week with the publication of the annual report of the Central Services Unit on first destinations of students graduating last year.

However, at the same time, the number of graduates has declined and there has been a sharp fall in graduate enrolment for teacher training.

Unemployment among graduates dropped to 9 per cent in December 1984 from 11 per cent in 1983 when 7,176 graduates were still in search of permanent employment. This indicates that 4,000 more graduates entered employment in 1984 than in 1983, and 1,500 more than in 1982.

Manufacturing industry, including agriculture and forestry, increased its intake by 1,240, while fewer graduates were taken into public service and

education.

The reason for this increase, states Dr Ian Davies, chairman of the service's statistics subcommittee, is probably due to the increased recruitment of pure and applied science graduates. However, it could also signal improvements in the national economy.

The increase in the number of graduates entering management services, from 1,793 in 1981 to 2,742 in 1984, "must be a sign of the increase in opportunities in areas associated with computer systems and software", he states, and could serve as an indicator to young people of the sorts of skills they need to acquire or develop.

A sharp drop in graduates entering some form of full-time teacher training is cause for alarm, notes Dr Davies, considering the Government's commitment to improving the quality and amount of science and mathematics in schools.

Since 1980 there has been a steady 2,000 graduates each year entering teacher training courses, and a fewer graduates in 1984 compared to 1983.

Of even greater concern is the 11 per cent fall in the number of mathematics and physical sciences graduates entering postgraduate Certificate of Education courses in 1983 also down by an estimated 30 per cent.

Contrasting with the drop in the degree graduates, the number of high first and very positive choice. Only 19 per cent had chosen correspondence tuition because courses were not available locally.

Most students gave as their reason for undertaking distance learning the opportunity to work in their own time, at their own pace, and in their own

## SDP pledges £50m boost for science

by Jon Turney  
Science Correspondent

A new national strategy for innovation would begin with moves to increase science budget by £50 million a year and to double the number of graduate engineers in Britain by the end of the century, according to new policy proposals from the Social Democratic Party.

These are main items in a package unveiled by the party this week in policy paper on research, technology and education. Other proposals include a New Technology Enterprise Corporation and a publicly funded innovation company, under the aegis of the existing British Technology Group.

The paper, drawn up by a group under Mr Parry Mitchell of the formation technology company Leasing, also says changing attitudes to new technology and the status of engineers are important in its specific policy measures. They call for a long-term strategy "aimed at future economic priorities for the UK, similar to the plans produced by Japan."

On research and development, the £50 million bonus for civil science would go along with new moves to promote civil exploitation of defence work, including revision of the Official Secrets Act, and formation of a new Council for Science Policy as a top-ranking advisory group. The council would be formed by amalgamating the existing Advisory Board for the Research Councils and Advisory Council for Applied Research and Development - as also envisaged in current Labour Party plans for administering public research.

On education, the paper recommends a five-year crash programme to end skills shortages in electronics, expansion of the National Engineering Scholarship Scheme and more conversion courses for would-be engineers.

## Canadian fellowship

The government of Alberta is to fund visiting fellowship at Edinburgh University's centre of Canadian studies, which will be open to staff in the province's four universities.

The Canadian studies in Britain for several years, particularly encouraging closer transatlantic links between academic staff.

Dr Gied Martin, director of the Edinburgh centre, which teaches Britain's only full degree course in Canadian studies, said it felt the need to have a western Canadian viewpoint represented in its presentation of the Canadian identity.

The province's government has also pledged financial support to the centre's "Experience Canada" student study tour, enabling a party of undergraduates to attend classes at an Alberta University during 1986.

Dr Martin has been appointed as co-director of a new academic journal on Canadian studies with Dr Peter Lyon, secretary of the Institute of Commonwealth Studies, by the Council of the British Association of Canadian Studies.

## Distance learning is choice, not necessity

by Maggie Richards

Distance learning students opt for their method of education as a preference, and not as a last resort.

That is the conclusion reached by the National Extension College, at Cambridge, which this week published a survey of its students - the first to appear for nine years.

Questionnaires were sent out to 1,000 NEC students last year. The responses revealed that the vast majority opted for distance learning as their first and very positive choice. Only 19 per cent had chosen correspondence tuition because courses were not available locally.

Most students gave as their reason for undertaking distance learning the opportunity to work in their own time, at their own pace, and in their own

homes. Among the women, 36 per cent mentioned family responsibilities, while 29 per cent of men referred to constraints of work.

Commenting on the findings in the survey, Mr Richard Freeman, the NEC's director, says: "Until very recently there was a widespread belief throughout the world of education and training that no one in their right mind would ever take an open or distance learning course if they could possibly find a more traditional form of course locally."

"The NEC, however, along with other distance teaching institutions worldwide, was well aware that very few students actually chose distance learning as a last resort, the vast majority chose it as their first and very positive choice."

In examining student motivation, the survey also revealed some dramatic changes since the last investigation in 1975.

The NEC attributes a massive decline in the popularity of Open University preparation courses to increases in OU fee levels. Faced with the prospect of high fees, OU students are not able to afford the additional cost of a preparatory course.

But the decline in this area has been matched by a leap in computer studies. Of the students questioned more than 25 per cent had enrolled on computing courses, and 11.4 per cent of women.

Enrolments for computing courses were also responsible for a large increase in the number of students with a first or higher degree, 22 per cent in the present survey, compared to 8 per

cent in 1975.

The survey did reveal some surprises in the popularity of certain subjects. The social sciences maintained a high profile, while the major areas of decline have been mathematics, English and humanities.

It also showed that nearly 30 per cent of men students classed themselves as not working, compared with 7 per cent in 1975. These included pensioners and those who had taken early retirement, but did not recognize themselves as being unemployed.

The NEC says the findings in this area indicate many more students might be attracted if financial aid was available.

*Student Profile Survey 1984*, published by the National Extension College, 18 Brooklands Avenue, Cambridge.

## Prophets take the blame

by Peter Aspden

Economic forecasters, the prophets and soothsayers of today's industrial world, are being ruthlessly exploited by governments and businesses who are trying to cover up their own mistakes.

The claim is made in a paper by two economists at Brunel University, David Elkan and Walter Elkan, who have studied forecasts by six prominent bodies during 1984, and found virtually all of them to be wrong.

They say in the paper that forecasting can still provide a useful and scientific function, provided the assumptions and models employed by the forecasters are examined in as much detail as the predictions themselves.

But they criticized some of their "most talented colleagues" who had seduced into forecasting because Government and business clamour for them. They clamour for them because, as with soothsayers of old, a forecast can be used to escape responsibility for mistakes by laying the blame on bad advice.

The lecturers look at predictions made for the rates of inflation and growth in 1984. The survey shows that, of the six groups, only the Organization for Economic Co-operation and Development correctly forecast the country's actual output growth rate of 2.5 per cent.

The London Business School also came close with its prediction (2.4 per cent), but less successful were the Treasury (3.0 per cent), the National Institute of Economic and Social Research (2.0 per cent), the Confederation of British Industry (1.8 per cent) and the optimistic Liverpool Research Group (3.7 per cent).

The inconsistent pattern is repeated in the group's guesses at last year's inflation rate (3.0 per cent). Economists at Liverpool predicted a rate of 3.3 per cent, while the NIESR estimated the substantially higher figure of 6.8 per cent. The other groups plumped for figures in between those two extremes.

Ironically, Higham and Elkan stress that forecasters' predictions of growth and inflation rates are "remarkably good", compared with other economic indicators which show even greater fluctuations and inaccuracies.

## Down to business

A new series of courses covering all aspects of management skills and computer application in business is to be launched in the autumn by St David's University College, Lampeter. The programme, part of the Manpower Services Commission's training initiative for small businesses, will be run by Dr David Kirby, a tutor in the college's "Successful Retailing" programme.

the early 1960s. To be seen to be keeping to the unions is not going to help him very much. One of Mrs Thatcher's real achievements has been effectively to challenge the trade unions' self-appointed right to block every measure of industrial progress.

We so easily forget, of course, just how the personalization of politics has dominated previous eras. One only has to think of Wilson and Super Mac. Julian Critchley said of Mrs Thatcher that her stridency is unattractive and her self righteousness unappealing. That may be, but I also have personal experience of a warmer, more sympathetic and emotional person. Indeed I think she is driven by a romantic notion that her destiny is to achieve the radical reforms others - more timid - have shied away from.

Whatever her blind spots, she has swung the political debate into accepting the essentials of capitalism: profit making, competition, small business enterprise and less government. So, should we at some stage sack the cook, it might be sensible to keep the menu, with possibly a little more salt.

Keith Hampson

The author is Conservative MP for Leeds North-West

## Fowler joins critics of Green Paper

North East London Polytechnic rector Gerry Fowler has delivered a stinging attack on the Green Paper *Higher Education into the 1990s*, adding his voice to the groundswell of academic disquiet over the document of government policy.

The paper merely tightens the screw on an already bubbling cauldron, he states, with the consequence that this may "prove the formula for generating explosions in the course of the next few years."

Professor Fowler takes issue with the paper on a number of points, chief among them that policy remains financially led, and adopts an instrumental approach to the aims of higher education.

The low projection of student numbers and staff/student ratios into the 1990s not only underestimates the demands of women and working class and mature student sectors, but also supports or serves to support a contracting of the system - at a time when institutions are agitating for increased funding.

In addition, the paper fails to set out any clear strategy for switching from arts courses and steering students along a vocational path in the public sector, he argues.

Arts and social studies will likely suffer a double blow because of the planned increase in numbers in initial teacher education. To accommodate these "soft subjects" will be exploited to yield places.

Commenting on the current schools crisis, Professor Fowler concludes that the switch is liable to lead to a greater number of unfilled information technology teaching positions and unsatisfied demands for subjects.

And finally, notes Professor Fowler, the strictures on union sabbatical officers - as implied in the Green Paper - would undercut the efficient operation of student welfare and amenities.

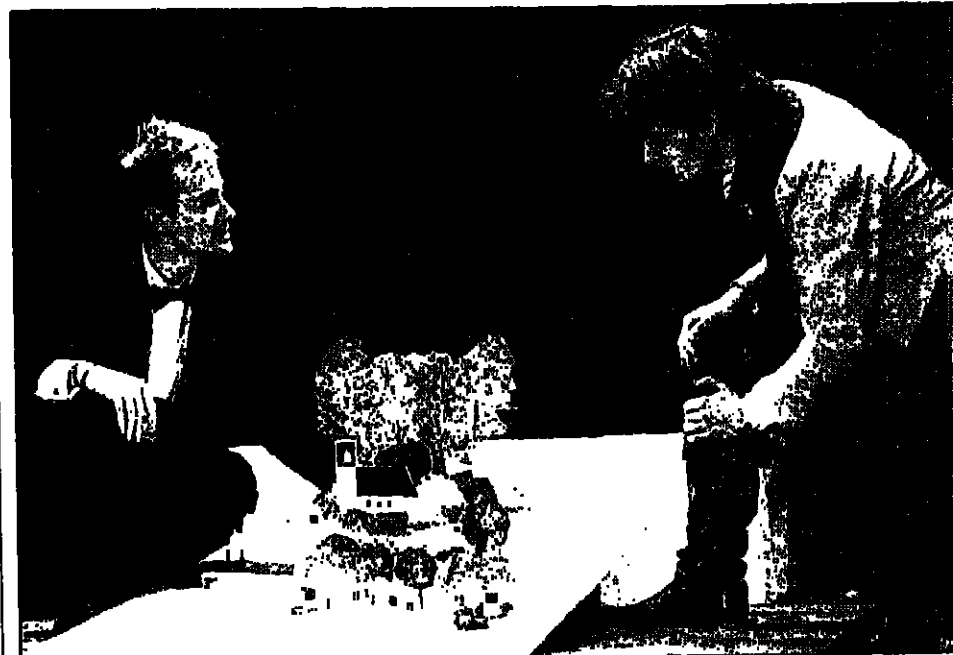
With the Journalists' annual orgy of sadistic cabinet reshuffling once again boring us every weekend, I felt it would be bad form to indulge in it myself. But what about Lynda Chalker as education secretary? And where can we put Mr Leon Brittan?

Mind you, deliberately stopping the public from getting news while arguing for freedom of expression demonstrates as mixed up a set of values as those of the Home Secretary.

While the combined efforts of Leon Brittan and the BBC were doing wonders for the morals of the IRA, the Soviet Union, Lhya, old Uncle Tom Cobleigh and all others appeared to British interests in this day and age, one crumb of comfort was the way the whole furore totally distracted attention from the Labour Party-TUC initiative on the economy. Neil Kinnock is said to be furious. He should in fact be thankful, for nothing helps the opposition better than a good old bogey man.

With Benn, Galtieri and Scargill as enemies, why does Mrs Thatcher need friends?

I would have liked to have said "who could have guessed that the new Labour leader would get himself once more into hot water with the unions". But alas it was all too predictable. So is everything in "A



Keele University student Mark Hazell (left) and Ian Chuter in a scene from Plescor's dramatization of *War and Peace*, which opened this week at the Edinburgh Fringe. Dr Richard Swigg, senior lecturer in English, raised more than £2,000 from local business and individuals to stage the production, which he directs. Keele University Theatre Company is also presenting *Female Paris*, four monologues by Dario Fo and Franca Rame, in the same run.

## Staff sceptical about research plans

by Jon Turney  
Science Correspondent

Staff in the Agricultural and Food Research Council have reacted sceptically to the council's long-term plans announced this spring. A reply to the council's policy paper from the trade union side says the plans are not detailed enough for proper comment, and opposes a number of the general proposals.

In particular, the unions say a policy of locating all research institutes in or near universities is unnecessary and would lead to excess costs and redundancies, and they say any shortfall in university funds should not be made up at the expense of the council's own laboratories.

They reserve judgement on the AFRC plan to appoint around ten directors with responsibility for research, and the detailed distribution is still not known.

and improve exploitation of existing agricultural research by industry. Staff representatives met council officials last week, but were not persuaded to move any closer to endorsing the overall plan. They want the council to campaign harder to sustain public sector agricultural and food research, and to publicize its benefits.

The AFRC is still waiting to learn the effect of a £10 million cut in the Ministry of Agriculture's research programme in 1986, announced earlier this year. The allocation of the cuts was being considered by the new Priorities Board for Food and Agriculture Research, chaired by Sir Kenneth Durham of Unilever. The Agriculture Minister announced last month that next year's cuts would have to be made before the board had completed its review of priorities, but the detailed distribution is still not known.

The council has recently advertised for a head of commercial operations, who will spearhead a new effort to win outside contracts for AFRC institutes, and reserve judgement on the AFRC plan to appoint around ten directors with responsibility for research, and the detailed distribution is still not known.

redced to calling for voluntary wage norms. Hol  
Yet again the economy is to be disrupted by inefficient state management taking over sector after sector. Investment confidence and the income generated by overseas investment, stimulated by the removal of exchange control, will dry up. Once again there is the assumption that the more you spend the more problems can be solved. Inflation will spiral again into the 10 and 20 per cent range and the government would once more have to slam the economy sharply into reverse.

Does the Labour Party these days remember a man called Wilson? Years ago, he correctly identified the need for "a white hot heat of technological revolution". But that revolution never happened. It is taking place now but unfortunately at a time when the baby bulge pours out of the schools and the labour market is swelled by an increasing number of women.

## PARTY LINE

Driving the voters to distraction

new partnership; A new Britain". We certainly need a new Britain, but it is hardly likely to emerge from this particular partnership. Far from being new, it is nothing more than turning the clock back to the early 1970s, when Messrs Jones and Scargill were trooping in and out of Downing Street, vying consensus documents - and reducing Britain to economic ruin.

There are some historical lessons to be learnt! Does the Labour leadership remember the winter of discontent? As in the bad old days, Labour's new partnership promises the unions everything without extracting a single concession from them other than the usual goodwill. Roy Hattersley knows in his heart, as Professor Layard has convincingly demonstrated, the unrealistic wage bargaining lies at the root of the long term movement in unemployment. Yet here we are with a document again saying that "wage restraint is no solution" and good old Roy

So, though by the end of the year one million new jobs will have been created over two years - more than in the whole of the rest of the EEC - the dole queues lengthen. It is the attempt to make a new Britain which is causing the unemployment tragedy. Booming retail sales hardly indicate that the problem is a shortage of demand.

To be successful, public leaders have to be personally clear and positive qualities believed in by the public. De Gaulle did it for the French and it was also true of Mrs Thatcher during the Falklands crisis. The public mood is looking for different qualities now. But it is not at all clear what Neil Kinnock is trying to portray. He does not convey the humbling vacillation of his predecessor but nor has he begun to convey the technical grasp and sheer quality of competence which so projected Harold Wilson into a formidably challenging position in

the early 1960s. To be seen to be keeping to the unions is not going to help him very much. One of Mrs Thatcher's real achievements has been effectively to challenge the trade unions' self-appointed right to block every measure of industrial progress.

We so easily forget, of course, just how the personalization of politics has dominated previous eras. One only has to think of Wilson and Super Mac. Julian Critchley said of Mrs Thatcher that her stridency is unattractive and her self righteousness unappealing. That may be, but I also have personal experience of a warmer, more sympathetic and emotional person. Indeed I think she is driven by a romantic notion that her destiny is to achieve the radical reforms others - more timid - have shied away from.

Whatever her blind spots, she has swung the political debate into accepting the essentials of capitalism: profit making, competition, small business enterprise and less government. So, should we at some stage sack the cook, it might be sensible to keep the menu, with possibly a little more salt.

Keith Hampson

The author is Conservative MP for Leeds North-West





## Intervention without information

The intervention by the Government which led the Board of Governors to ban the BBC *Real Lives* film is the kind of situation which those in higher education will find increasingly familiar. Higher education institutions on both sides of the binary line have been subject to direct ministerial intervention in recent years: alleged Marxist bias in certain Open University courses and in social science courses at the Polytechnic of North London have led to significant pressures on those institutions.

In both cases, as apparently with the BBC, intervention took place on the basis of hearsay evidence and allegations made to the Government sometimes by unidentified individuals. Both led to ministerial intervention in the affairs of institutions which are supposedly independent.

The authoritarianism which underlies such actions must concern those whose commitment to democratic principles and values lead them to support the free expansion of a wide spectrum of views and opinions to which they do not personally subscribe. Such a value system has underpinned our education service with its lack of central control over the curriculum and a tradition of seeking to preserve the autonomy of institutions and academic and cultural life.

This of course frequently leads to tensions with Governments of all political persuasions; but this Government is seeking to rewrite the rules and to redefine in its own terms what is to be regarded as an acceptable range of views and attitudes which will be allowed to flourish and develop.

In the case of the BBC the reaction to the intervention has been widespread and largely hostile. Unfortunately in the case of the education service the protests have been more limited and those who ought to have rallied in defence of democratic principles have often been found wanting. It is perhaps a measure of the extent to which the Government has eroded support for the higher education system that it has been able to intervene with so little public outcry.

The Green Paper on higher education is now seeking to marginalize whole areas of academic activity - those broadly classified as the arts and humanities. Such courses will of course still be "tolerated" and if the Government has its way, concentrated in the university sector. Governments of all political persuasions have previously sought to enhance the standing and prestige of science and particularly engineering courses; but hitherto this has not been at the expense of courses in the arts and humanities.

The Government may well believe its policies on higher education have broad popular support; something it also claims of its views on banning the documentary programme. Widespread support does not of course render authoritarian principles the less authoritarian; but somehow I doubt such support exists. Opposition to policies on higher education will continue to be most effectively expressed in the decision of thousands of young people seeking entry to higher education. I remain hopeful that they in no way share the narrow and philistine perspective underlying the Green Paper.

Jean Bocoock

The author is the assistant secretary, higher education, at the National Association of Teachers in Further and Higher Education.

# AUT claims contract victory

by David Jobbins

The Association of University Teachers is claiming a significant victory in defence of lecturers employed on short-term contracts following a tribunal hearing in Newcastle.

Newcastle University has admitted it was wrong to refuse a consultation with the Association of University Teachers over the redundancy of a temporary lecturer although he had signed away his right to compensation.

After the admission, the Employment Appeal Tribunal ordered a new hearing before a fresh tribunal into the case of Mr Gordon Campbell, who specialized in training teachers for the deaf.

Mr Campbell had been employed on a three-year contract expiring on October 31 1983 and had signed a waiver clause surrendering his right to redundancy compensation. About eight

months before the contract was due to run out, Newcastle warned that the course would end because external charitable funding had run out and on September 14 Mr Campbell was notified that his contract would not be renewed when it expired the following month.

When the AUT complained to an industrial tribunal that it had not been consulted over the redundancy as required by the 1975 Employment Protection Act, the university said that the dismissal was not a redundancy but the expiry of his contract.

The AUT appealed after the tribunal accepted the university's view that the dismissal of a contract employee at the end of a fixed term contract when funding had run out was not redundancy.

When the case came before the employment appeal tribunal, Mr Jus-

tice White noted that the university now accepted it was under a duty to consult the AUT at the earliest opportunity over redundancies.

Both sides now agreed that the test of redundancy was objective and that the original hearing had erred into considering the university's motives.

The judge ordered the case to be heard before an entirely fresh tribunal but the AUT believes an important principle applicable to other universities has already been won. It believes that the outcome means that consultation is obligatory in the vast proportion of cases involving the research and teaching staff who teach the end of their short term contracts.

The union wants to use the consultation to monitor redundancies and possibly to find ways of redeploying staff or tapping bridging funds to avoid dismissals.

## High tech centre for Queens

by Carmel McQuaid

A reorganization in the engineering faculty of Queens University Belfast which would combine its three existing units into a new Technology Centre for Northern Ireland - has been recommended in a report presented to the vice chancellor.

Prepared by a working party led by Sir Joseph Pope, a former vice-chancellor of the University of Aston, the report, commissioned in June 1982, proposes that the unit be headed by a full-time staff and offer over 20 courses in engineering and information technology. It would focus on training engineers to develop their own products for manufacture in Northern Ireland.

The new dean of the engineering faculty, Professor Gordon Blair, who has a distinguished record in industry research in Japan and the United States, would act as executive director of a £1 million investment programme has been envisaged.

The three existing units - the Northern Ireland Automation Centre, the Northern Ireland Materials Technology Centre and the Wolfson Signal Processing Unit - would be accommodated in a single site, equipped with modern computer aided design facilities, laboratories and information library.

But the recommendation, which has been approved by the Queens senate, will not take effect unless the Government agrees to have the agencies' funds make use of its facilities. At present industrial and government contracts bring the three units a combined annual £1 million turnover.

"There is no point in establishing a centre of this sort if the Government doesn't use it, so we will have to be convinced discussions to decide these things," a spokesman for Queens said.

## Scottish data could upset predictions

by Willis Pickard

The controversial predictions about uptake of higher education which underpinned the recent Green Paper may have to be refined when a new research project at Edinburgh University reports.

The research is funded for two years to the tune of £49,539 by the Scottish Education Department and will take place at the university's Centre for Educational Sociology, which contains a data archive going back to 1962 on Scottish school-leavers' qualifications, intentions and attitudes. The hope is to use that data to give more reliable predictions about likely changes in demand for higher education.

Mr Andrew McPherson, director of the project, said that, for example, they were already aware that the growing demand by women had proved "robust" in the face of cutbacks in the number of places since 1981.

The project will look at what happens in schools in terms of pupil performance and desire for higher education. It will also examine social changes: if Scotland is becoming a more middle-class country in terms of educational background and occupation, will that result in greater demand for higher education by their children, since it is the middle classes which in the past have produced most entrants?

The attempt to extrapolate future demand on the system will, Mr McPherson hopes, be relevant not only to Scotland but in the United Kingdom as a whole. Scotland is unique in having the educational data archive, which is largely built upon biennial surveys of school-leavers, and the Department of Education and Science called upon previous research from Edinburgh's department of educational sociology when preparing the Green Paper.

Associated with the new research will be Dr Ian Diamond, of Southampton University, who has already been using the Scottish data as a basis for assessing likely demand south of the border, especially in the public sector for which there is no English data at all. (TESS)



## Student playwright on air

Birmingham Polytechnic student Avanti Kumar finished an industrial experience placement at BBC Pebble Mill in Birmingham by having a play accepted by Radio 3. Now the 25-year-old former tax officer hopes to establish himself as a full-time writer - he is working on a second play for Radio 3, and a 90-minute drama for Radio 4's 90-minute slot.

Mr Kumar gave up his civil service career in 1982 to enter higher education and prepare for life as a writer. "I chose the graduate diploma in communication studies at Birmingham because I wanted to be a writer

and the course concentrated on professional writing skills," he said.

At Pebble Mill he was attached to radio drama producer Philip Martin to help with a school drama festival. Afterwards he showed some of his stories to Mr Martin who said: "I was amazed at the quality of his writing and I had decided within an hour that I wanted to produce it."

Mr Kumar adapted his story, entitled *The Noise* for radio, and Radio 3 drama editor, Ned Shilleet accepted it. It was broadcast in July and will be repeated in the autumn.

## Marine staff fear closure

Staff at the Institute for Marine Biochemistry in Aberdeen fear their laboratory may be put on the Maud Environment Research Council's dole list when their current director, Professor John Sargent, leaves this autumn for Stirling University.

Professor Sargent, who will become head of Stirling's biology department, hopes to take several of his own research group with him. The 20 scientists fear this will weaken their case for staying there.

The NERC is looking for site closures to reduce overheads as part of its cost-cutting corporate plan. The future of the IMB is likely to be decided in September, when a council meeting will consider research plans drawn up by the remaining staff.

Professor Sargent only became director of the institute in 1983, and it has always been one of the smaller NERC establishments. It has close ties with the University of Aberdeen, which used to operate the laboratory as the Fisheries Biochemical Research Unit - serving one of the main local industries.

## Factory safety 'among best'

British safety regulations to control the activities of potentially dangerous factories and plants are among the strictest in the world, a seminar at Bradford University was told.

A study group was formed to discuss the effectiveness of the Government's new Control of Industrial Major Accident Hazard (CIMA) regulations, which were introduced at the beginning of the year.

Worldwide concern has been mounting over industrial safety controls since lethal gas fumes escaped from a Union Carbide plant in Bhopal, India, last December, killing more than 2,500 people. The same company was involved in another gas leak in West Virginia earlier this week, which injured at least 175 people.

Dr Alf Keller, reader in industrial reliability at Bradford, said the new

regulations in Britain, inspired by EEC legislation, were a major advance in safety standards.

The CIMA regulations, which were discussed by industrialists and factory inspectors and safety executives, provide new instructions on on-site and off-site emergency plans, giving more information to the public and on preparing safety submissions for Government inspection.

The seminar was one of a series of regular meetings held at the university on topics related to major hazards and reliability. Dr Keller said there were plans to run a three-day study on risk in conjunction with the European Safety and Reliability Association.

He said the university was also considering introducing an MSC degree on safety and reliability in Europe.

## Information technology to get largest share of DES £40m

The Department of Education and Science is to spend £40 million on programmes under the Education Support Grant scheme in 1986/87, including a new £2 million initiative on action to combat drug misuse.

Local education authorities in England were this week invited to tender under the scheme - and a share of the £1.5 million allocated to new expenditure committed as a result of 1985/86 allocations.

The decision on which activities deserve support and will assist local authorities to better respond to changing educational demands is taken by the Secretary of State Sir Keith Joseph in consultation with the Association of

County Councils and the Association of Metropolitan Authorities.

In higher and further education, the single largest allocation of funds for 1986/87 projects is to go on information technology in non-advanced further education.

New expenditure of up to £9 million will be available to education authorities to extend use and awareness in this area. The funding is to be split between hardware, courseware and programme to assist both students studying vocational subjects and able and skilled in computer technology.

Although the programme is designed specifically for colleges of further education, the DES recognizes that

polytechnics and other higher education institutions may have a significant contribution to make in this area.

A further £1.6 million has been awarded in grants to promote the use of computer-based information systems for the management of further education establishments; a continuation of a 1985/86 allocation.

The Professional Industrial and Commercial Updating (PICKUP) scheme has been given a further boost, with £1.6 million provision for the initial cost of developing and marketing the retraining and updating courses. The grants are short-term should recover costs through course fees.

The account on NAFE and the marked government concern with the

ties between colleges, commerce and industry is highlighted by a £300,000 grant under the heading "Strengthening college-employer links to improve the quality and relevance of non-advanced further education".

Under this provision, local education authorities will be able to appoint full-time personnel to assess the effectiveness of college-employer associations and promote closer ties where possible. The project leaders will also be in a position to investigate vocational education and training needs of employers in the local areas.

The particular needs of disadvantaged and handicapped students has also been accorded priority, with £500,000 in grants allocated to the provision of computerized aids.

## Polish anger at reforms

Students at Warsaw University have called for a boycott of the forthcoming Polish parliamentary elections in protest at the reform of Poland's higher education act, passed last month by the Sejm (parliament).

Polish students are unconvinced by the announcement from minister of science and higher education, Mr Bronislaw Gieremek, that the reform "will not infringe on the form of academic self-government" and there have been reports from several universities of student protest meetings being broken up by the police, whose power to restore order on campuses has been increased considerably by the amendments.

Reactions from academics to the passage of the amendments has been somewhat more restrained, particularly as recent decrees could be interpreted to make it an "anti-state" offence simply to express one's indignation about the government. For the most part, their public reaction can be summed up by the remark of the Warsaw University pro-rector on the eve of the changes, who told an Austrian TV reporter: "If I say nothing about the amendments, it will be bad, but if I say anything, it will be worse".

The passage of the amendments, was, however, carefully timed to fall in the middle of the vacation - even though this meant that so controversial a bill went through in the dying session of a Sejm which had already been prolonged more than a year beyond the normal term. Credibility would have undoubtedly been gained by holding the amendments over to the next session, since, passing them now meant that the identical Sejm which granted academics freedom in 1982 abrogated it in 1985. This, however, the government was unwilling to risk.

Scholars from the universities (though not from the Academy of Sciences) have found it relatively easy this summer to obtain passports for conferences abroad - without giving any of the guarantees of political good conduct demanded until recently of some academy employees. This meant that when the amendments were passed, an unexpectedly large number of Polish university staff were either abroad or just preparing to leave the country.

The full reaction of the universities to the amendments, therefore, cannot be fully gauged until next term. However, although the amendments effectively give the minister political control of the universities, the vociferous opposition from the entire university community (including a large proportion of university party members) forced the government to leave the universities some vestige of formal autonomy.

Although self government bodies have now lost most of their decision-making power, they will continue to exist, if only as voices which the government is no longer obliged to heed.

## Strewth, mate, anyone can be a pom

from Geoff Maslen

MELBOURNE

Fair dinkum, those blokes at the Australian National University must have heads on them like Einstein. True dinks. After 10 years of hard slog, the eggheads have come up with irrefutable evidence to explain the origin of the term "pom" - the word often used by Aussies to describe citizens from Britain.

According to the bloke in charge of the Australian National Dictionary project at the ANU, Dr Bill Ramson, research has shown that "pom" resulted from the use of rhyming slang in Australian speech.

Bill Ramson quotes as an example a heading in the Sydney *Truth* newspaper in 1912 which, in referring to an immigrant, used the slang "Jimmy Grant". From this the term was changed to "Pommiegrant" and then to "Pommie" for short.

Just about everybody and his dog used to reckon "Pom" came from pomegranates because of the ruddy cheeks the Brits have when they arrive - flushed with the success of getting here, no doubt.

Anyway, the old Bill says there's nothing doing in that quarter. Not only that, he says the word

wasn't even used at first to label English immigrants. It had been attached to anyone who came down under to settle. Strewth.

Ramson and his 10 mates, by the way, figure the two million word dictionary should be finished in time for the 1988 bicentennial whing-ding.

By that time, Bill says, he and his cobbles will have read more than 7,000 books, all Australian newspapers up to 1850, selected major newspapers up to 1900 and many issues since. Talk about wearing out the old eyeballs.

According to the wordman, white Australians began making up their own terms almost as soon as they got here - shackled or not. "To drag the chain", for instance, obviously came from our convict dads and was often used by shearers when one of the group was lagging behind the others.

"Shella", says Bill Ramson, derived from "Charlie Wheeler" which was rhyming slang provoked by a painter of nudes, Charles Wheeler, who was born in 1881 but hung around until 1977 - long enough for "Shella" to fall out of favour.

A lot of our expressions had to do with Tucker. Underground mutton was wry Australian for

rabbit, while a colonial goose meant mutton stuffed with sage and onions.

Some words had to do with the size and geography of Australia. "Back" indicated a great deal. "Back country" meant the areas immediately behind the coast. When people began to move inland there were descriptions of "back blocks" and "farthest back".

But giving someone "a boot up the acre", isn't associated with the land but seems to have been borrowed by Australian soldiers in the First World War from the Arabs - I kid you not.

"Commonwealth" - a word much loved by the whackers in Canberra - used to be used with scepticism in the states in the days before federation. At the end of the nineteenth century, Ramson reckons, it was quite usual to refer to Australia and Tasmania, rather than just Australia. Earlier still, Australia had really meant just New South Wales.

Earlier this month, Dr Ramson handed section A to D of the dictionary to the publishers, Oxford University Press. The book will be published by OUP in association with the Australian Broadcasting Corporation. Should be a bonzer effort.

## No Deutschmarks for Eureka

from Barbara von Ow

MUNICH

The West German government has decided not to make special funds available for the Eureka research programme. And it is coming under pressure from scientists and celebrities not to participate in President Reagan's Star Wars research.

Research minister Heinz Riesenhuber contradicted a statement by foreign minister Hans-Dietrich Genscher in an interview with *Der Spiegel* in which he said that Bonn would follow the French government in providing some DM330 million.

Eureka will not be a new well for state funds from which people will be able to help themselves. Herr Riesenhuber said. The French-proposed initiative would be measured with the same norms as national projects, he noted, adding that the ministry's budget for 1985 and 1986 would not be amended because of the Eureka scheme.

The minister declined to give definite figures, noting that the ministry did not want to influence on going calculations in private industry.

Meanwhile, the Confederation of German Industry has expressed its support for the Eureka scheme as well as the six focus research areas proposed by the French government.



Herr Riesenhuber: contradiction

Following a session of the research council of the European Commission in Brussels, a BDI spokesman, however, called for closer cooperation between European research institutions and industry. Particularly, coordination had to be improved in modern transportation, environmental techniques, communications systems and modern industrial techniques.

The BDI generally wished to see the Eureka scheme integrated as widely as possible into existing EEC structures.

## US cracks down on defaulters

from William Norris

WASHINGTON

The crunch is coming for a million American graduates who have failed to repay the money they borrowed to get through college. The education department, which has already begun to blacklist the credit ratings of defaulters, to have them pursued by private debt collectors, and to prosecute them through the courts, is now wheeling out the ultimate deterrent: the Internal Revenue Service.

Education secretary William Bennett has announced that his department is to ask the IRS to withhold tax refunds from the most stubborn million, and roughly the same number will be getting letters from state agencies to warn them that they, too, will lose their refunds next year unless they make good their debts.

The IRS, which has a unique capacity to strike fear into the heart of every American, is being employed under an act of Congress passed in 1984. Its principal target will be the \$3 billion outstanding on low-interest loans financed by the federal government under the guaranteed student loan programme. Another \$1.1 billion is in default from the national direct student loan scheme under which students are subsidized through their schools.

"I think it's going to be without a doubt the most successful thing we've ever done to recover defaulted loans," said Richard Hastings, director of debt collection for the education department. "We're talking probably hundreds of millions."

Mr Hastings admitted that some of those in default might be out of work, and would therefore escape his new net. But he was convinced that the majority had simply made "economic decisions" not to repay their loans.

Warning letters to defaulters have gone out this week. They will have 60 days to begin repayment or make suitable arrangements before the IRS is unleashed. A trial scheme under the act has already been tried out on people who owe money on child support payments and has netted \$221 million.

## Campus closed after murder of civilians

from Benny Morris

JERUSALEM

Four students at An-Najah National University, the West Bank's largest, have been put in "administrative detention" by the Israeli military authorities, and face up to a six-month wait before facing any charges or a trial.

The students, Mohamed Jallil, Ismael Ramadan, Hassan Ayoub and Abd al Ma'ne Ghassan Hassan, were detained following the closure of the university for two months by the authorities, after they discovered

material they thought "likely to incite".

The closure of the university in Nablus was part of a general crackdown on anti-Israeli dissidence in the territory after the recent murder of three Israeli civilians - one of them in the centre of Nablus - by Arab terrorists.

Following the murder on July 31 of Albert Bokharis, a soft drinks salesman in the city's Casbah, the military authorities clamped a curfew on the city and ordered the temporary closure of the campus.

The closure was expected to be lifted along with the curfew on the city (lifted last weekend). But during a search of the campus, the security forces found in the student union offices large quantities of placards and posters promoting Palestinian nationalism. The military said the material included "incitements to violence" and resistance to the Israeli occupation.

The military governor of Nablus called in Hikmat Al-Masri, chairman of the university's board of trustees, and handed him an order closing An-Najah until October 2.

## French scientists resign in row over teaching posts

from David Dickson

PARIS

Two prominent French scientists have resigned from the main administrative council for the prestigious Ecole Polytechnique in protest at the award of teaching posts to two close political colleagues of President Francois Mitterrand which, they claim, had been made under political pressure from the government.

The teaching posts in dispute were two out of four that had been added to the academy's department of humanities and social sciences. After an intense debate inside the department, it was decided by five votes to four, with two abstentions, to award one of the posts, in "social, political and international economics" to Mr Jacques Attali, the president's top political adviser.

Mr Attali is the author of 10 books on a range of academic subjects, the most recent being on the history of the concept of time. He had previously

held a teaching post at the Ecole Polytechnique in the economics department, but this had recently expired.

In another close vote, the department also decided - this time by six votes to five - to offer a teaching position in "fashion and dress" to Mme Elizabeth Badinter, the wife of M Robert Badinter, who occupies the position of Guardian of the Seals, the top legal job in the French Cabinet.

Mme Badinter has been on leave from the same department since 1977. She is also the author of several books on feminism and on the history of ideas.

In both cases, critics of the decisions claim that the offers were being made to pressure the government. They claim that the two were seeking "soft landings" in the expectation that the socialist government will fall from power during next year's general election, and that hints had been dropped that failure to award them the posts

could result in further cuts in the academy's budget for next year, already under strong pressure.

As part of the conventional practice, both teaching posts had to be approved by the academic board of the Ecole Polytechnique, as well as by the council of administration.

The academic board had recommended a delay in both nominations. However the board added that if the nominations were approved by the council of administration, they should only be made for one year, and that a general review should be carried out of the way that candidates were selected for posts in the department.

In particular, the board suggested that decisions on new appointments should not be based purely on an internal evaluation of the candidates, but that this should be complemented by the views of outside referees, as is already the case in the academy's science departments.

However, the council of administration rejected this advice, defeating by

nine votes to seven a motion that the award of the two posts should be delayed, and confirming the two appointments, both for a period of two years.

Following this decision, however, two members of the council announced their resignation. One was Laurent Schwartz, professor of mathematics at the Ecole Polytechnique, and recently appointed chairman of a new committee which has been set up by the government to evaluate the performance of French universities.

The second resignation was that of a prominent biologist, Philippe Kourilsky, who is vice chairman of the government's top advisory committee on the funding of scientific research. Both Schwartz and Kourilsky claim that the conditions under which the two teaching posts were awarded represented a "rupture with the tradition" of the institution and thus a challenge to its academic integrity and autonomy.

Meanwhile a new report from the National Association of Student Financial Aid administrators shows that it is the most recent graduates who are having difficulties with repayment, especially women under 25. Such former students, with an average salary of \$17,500 are facing the prospect of paying back about 10 per cent of their earnings every month for 10 years. The burden is having an effect on their life decisions, forcing them to hold down the size of their families, and postpone the purchase of cars and houses.

Nevertheless, the report adds, most of those questioned were grateful for the loans they got, and only 22 per cent believed they should have borrowed less money.



# Black students feel the squeeze

from William Norris

WASHINGTON It should not be happening. There are quotas and goals and timetables in place, and a host of regulations to ensure that it does not. And yet there is a counter-revolution taking place on the campuses of America: the number of black students is dropping and dropping quite fast.

In 1976, as a direct result of the civil rights movement, a record total of 749,000 black high school students went on to college. They represented 34 per cent of black high school graduates, which was only slightly lower than the proportion of whites who advanced to higher education. But that was the peak. By 1983, although the number of blacks emerging from high schools has continued to rise - by 500,000 - the total going on to university had actually fallen by 8,000.

In that year, the last for which census bureau figures are available, only 27 per cent of black high school graduates progressed any further.

The trend is continuing. Since last December, at least 12 states have reported declines in the number or proportion of blacks enrolled in colleges and universities. In Arkansas, Kentucky, Louisiana, Tennessee, Texas and West Virginia, universities have failed to satisfy federal desegregation plans. In Illinois, Indiana, Michigan, New Jersey, Oregon and Wisconsin, they have not met their own self-imposed goals.

In theory, the former states should have suffered penalties under civil rights legislation, the courts had ordered them to increase the number of blacks in their public colleges. But no action has been taken, and the general belief is that under the Reagan

administration the orders will not be enforced. There has been a sharp move away from affirmative action to ensure that minorities get a fair deal.

Civil rights leaders see this as one reason for the decline in black enrolment. On seeing the government slacken its efforts to end discrimination, they argue, the universities followed suit and stopped providing special services to aid black students.

But the major reason is probably economic rather than political. Black family incomes have increased by only 57 per cent over the past decade, while 110 per cent. This disproportionate shift, allied to limitations on student aid, seems to have convinced many blacks that they simply cannot afford a higher education.

The threat of further aid cuts in the future, though temporarily withdrawn

after congressional objections to President Reagan's proposal, has further discouraged the black students. There also seems to be a growing belief that a college education will no longer help to get high-paying jobs.

And the universities themselves, in their quest for higher standards, have not helped. They have raised their demands, both for admission qualifications and for undergraduate performance, and this has militated against those blacks who emerge from high school less well prepared for college than their white peers.

An aggrieved spokesman for the National Urban League said this week: "All students, black or white, deserve the best education. But the push for excellence becomes elitist when tests and other mechanisms are used as gate-keeping standards to keep people out."

## Unesco in cuts dilemma

from David Dickson

Third World nations are angry that the grants provided by Unesco for non-governmental organisations to be reduced by the same proportion as the cuts being made elsewhere in the agency's budget to cover the withdrawal of the United States.

Bodies which are likely to be affected in various degrees by the general conference which meets in Sofia - range from large organisations such as the International Council of Scientific Unions, the International Social Science Council and the International Council of Museums, to relatively small groups, for example, the International Association of Legal Critics and the International Association of Translators.

Previously, Unesco director-general Mr Amadou Mahtar M'Bow promised there would be no reduction in the subsidies provided to NGOs during the two-year budget period 1986/87 covering the first of the agency's bienniums. The Unesco secretariat's original recommendation to the general conference had been to cut the grants which it provides to separate NGOs should be \$2.5m, almost identical to the figure for the current 1984/85 biennium.

Mr M'Bow's proposal had in years been endorsed by the developed countries from both the western and eastern blocs. Their support was based largely on the fact that the NGOs play an important consultative role in Unesco's development work, and evaluate the requests for funding that it receives.

The suggestion that NGOs grant maintenance at the current level, however, was sharply contested by several representatives from the World countries during the meeting of the agency's executive board, which took place in Paris in May and June. Countries such as Bangladesh argued that it was unfair that the NGOs should be spared the reductions that were being imposed on other parts of Unesco's activities in order to accommodate the budgetary needs of the US withdrawal at the beginning of the year.

Reflecting such views, the developing countries, negotiating under the umbrella of the group of 77, proposed reducing the total NGO subsidies by \$1.3 million. This was 25 per cent of the total being proposed by the secretariat, and represents the proportion of the total budget which had previously been paid by the US.

After a long series of negotiations, the 51 members of the executive board agreed to recommend to the general conference a cut of \$900,000 as part of a broader package of alterations to the 1986/87 programme. Western diplomats see the proposed NGO cuts as part of a necessary compromise which they had to make in order to get the whole package accepted.

This figure represents almost 20 per cent of the NGO subsidies which the secretariat had suggested should be treated as "top priority" - and thus funded in full. The proposed cut has taken many of the NGOs by surprise, particularly since they had previously felt that with the support of both Mr M'Bow and the support of both the western and eastern blocs, their chances remained high of receiving grants comparable to those of previous years, despite the financial stringencies being imposed as a result of the US action.

Many of them argue that targeting the NGOs for cuts will not address the major reservations that many of Unesco's large donor countries - particularly the western bloc - have been making recently about the activities of the agency.

A spokesman for the International Council of Scientific Unions said in Paris that his organization is likely to be less affected than some of the others by any cut in its Unesco subvention.

Some of the smaller organizations, however, rely almost entirely on Unesco for their operating budgets, and would be hard hit.

Leicester University's switchboard was jammed at the end of May in the afternoon of the Brussels football disaster as just about every major English-speaking newspaper and radio station in the world was trying simultaneously to contact three Leicester sociologists - Eric Dunning, Pat Murphy and John Williams.

The media wanted to tap seven years' specialised study of football hooliganism, and Eric Dunning vividly recalls the extraordinary couple of days following the Heysel stadium tragedy: "As I watched the game on television I was phoned by Radio Leicester, and asked to go on at 7 am the following day. Then Breakfast Time rang."

The next couple of days were crazy and chaotic. The phone rang as soon as we got into the department and it never stopped. As soon as one call finished another came on and callers were barked up, three or four at a time, waiting for their turn.

"We spent the whole two days giving interviews to Britain, Italy, the USA, France, Germany, Australia - it seemed like the whole world. I was on television several times as well - and I was supposed to be marking exams."

John Williams, Liverpool supporter and chief fieldworker for the book *Hooligans Abroad* had hoped to be in Brussels, but missed the game because the Department of Environment, sponsors of their latest project, decided they'd rather send two civil servants.

Williams points out that little of the interviews and writing he did after Brussels was directly concerned with events at the Heysel stadium. Most questions were looking for an explanation of the phenomenon of football hooliganism, not its effects.

The Leicester group first came to general public notice with the publication in 1984 of *Hooligans Abroad*, based on Williams' experiences travelling with English fans on the continent. By then they'd already been working on soccer violence for six years.

The trio came together in 1978. Dunning already had several publications on the sociology of sport developed from Norbert Elias's theories of the civilizing process. Murphy was a criminologist dealing with the sociology of crime, and Williams working on a PhD thesis on hooliganism, supervised by Dunning.

Getting an SSRC grant wasn't easy. An SSRC/Sports Council project published that year had stated confidently that no further research was needed on the subject as it was a transient youth fashion which would die away. Even when they'd got the money Dunning was mildly taken back to hear the wording of their submission criticized by SSRC chief Michael Posner at a sociology conference.

"He told us he had to defend sociology projects against the Government and as an example he quoted a



## Understanding terrace violence

With the football season starting tomorrow, Huw Richards reports on Leicester's pioneering study

splendid, admirable project at Leicester University which used terms like 'working-class social bonding' and 'socio-genesis of football hooliganism'. "You can't use words like that," he said. "I was amazed - you could hardly call any of that sociological jargon or politically loaded terminology."

The first piece of research forms the basis of their forthcoming book *The Roots of Football Hooliganism: A Historical and Sociological Study*, due out next year. It has three major foci. The first is historical, examining newspapers over long periods to work out long-term variations in crowd disorder. This work rapidly demolished the still popularly held theory that crowd trouble is an exclusively modern occurrence.

Second was a study of Leicester City's matches over two seasons in both the first and the second division. The three looked at crowd disorder in relation to possible causal factors such as match events, refereeing, the number of fans present and traditions of rivalry with the visitors.

Third was the study of young men from a Leicester council estate, whose residents accounted for a fifth of arrests at the ground over the two years. This involved John Williams as field worker in getting to know the fans.

This project provided the framework from which their theories of hooliganism have been derived. The SSRC report was completed some time ago, but the book has been held up by other work.

Since that project finished they've followed the path of many university

researchers in the straitened 1980s - contract research for bodies outside traditional academia. Sir Norman Chester, former warden of Nuffield College, Oxford and deputy chairman of the Football Trust - a body whose function is improving football's environment - encouraged them in successful bids for trust funding to study English fans abroad, and examine the effects of Coventry City's all-seater stadium.

Their current work, funded jointly by the trust and the Department of the Environment, is exploring the effectiveness of different crowd control measures. Non-academic funding has altered the thrusts of their research, says Dunning: "They have inevitably pushed us into a deeper look at the practical consequences of the whole problem, and in the direction of applied work."

Inevitably they have become enmeshed in the search for "solutions" and "practical answers". There is an interest conflict between the academic seeking to explain and politicians and civil servants simply looking for an answer.

The two are not mutually exclusive. But the different aims, perspectives and priorities involved are an unavoidable source of difficulty, as Murphy points out with the example of reactions to their Coventry City report: "The social references were criticized on the grounds that we shouldn't be concerning ourselves with the whole of society in a report of this kind."

Murphy says: "People who call for action and solutions now don't seem to realise that understanding must come before effective policy - yet as soon as



Violence and tragedy at the Heysel stadium

we seem to show understanding of a problem this is equated with showing sympathy". He points to the normal terms of media discussion as a positive obstacle to any solution. "So much of the discussion starts from the assumption that hooliganism is meaningless and mindless and uses terms like 'animals', assuming that it can't be understood."

Dunning is scathing about the limited vision of official policy: "The ideas that dominate official thinking are a variant of magical, mythical thinking. We've had short sharp shocks, control and punitive measures over 20 years and they've displaced and altered the problem, but it's still there."

The group's message is that understanding is crucial. "There's a basic failure to see the complexity of the issues and the diversity of standards involved, and a large number of people seem incapable of bridging the gap."

"There's a need both for broad-based structural change, and for measures to have immediate impact. Long and short-term measures have to be harnessed in a strategy. There's a tendency in our society for some bodies to propose long-term, 'others only short-term measures. If the FA and the Government want to be practical they've got to do both. This is central - if they don't link the two neither will work", Murphy says.

Whether football's rulers will see it

this way is another matter. "It's very difficult to persuade most football people that anyone from the outside has any valid advice on what to do", Williams says.

And he points to an even greater barrier to understanding behaviour on the terraces. "You get reports on the behaviours of football fans, but the one group who are never asked to give evidence or opinions are the fans themselves. You get different branches of the establishment talking to each other."

The project's future is uncertain, dependent on the next short-term contract to sustain work. Williams contrasts British and West German attitudes to the value of research. "In spite of the long tradition of crowd trouble in Britain governments have never really seen it as a legitimate area for research. There's a persistent belief that it'll go away at some point in the near future."

A cross-national project, linking with German and French researchers is one possible future development for the group.

"Everything depends on broader questions about the status of the universities, academic research and sociology itself. Will people realize that the disciplines of social science have an important role to play in understanding and explaining relationships between groups in society?" by VCS.

"If the course is produced by an expert in that area, with people clamouring to get it, there's no point in a very expensive production because industry wants the information now. On the other hand, if the area is not so close to the frontiers of knowledge, you would probably have to put quite a lot of money into it to make it attractive."

The style of presentation of American DLVCs is not always up to the standard people are used to in the UK, being largely of the "chalk and talk" variety. "In Britain, we produce very good quality television; we're as good as anybody at teaching; we're as good, if not better, at innovating. If we could capitalize on these three things by making good DLVCs, I think we could become the educational centre of the world."

Video learning has two major advantages, Dr Stephen believes. It transforms the usual ephemeral status of teaching. And it produces a spiral of improvement, since it can be studied and criticized. But academics may be put off by these very qualities. They may feel they are simply setting themselves up to be shot down, or object to the loss of a lecture theatre full of admiring students.

"They need some motivation, which is either money or promotion prospects. And in both these cases, DLVCs are a means to an end. If you're the world authority on a subject industry needs, I suppose you could name your price". At present, many academics, if they do not think videos irrelevant in the first place, feel the Open University should produce them, says Dr Stephen.

But he believes only the UK university sector as a whole has sufficient staff, research and television facilities. He has already begun visiting university television units in the hope of establishing a network of approved centres where academics can go to make courses. And he feels higher education institutions should be prepared to learn from one another.

## Tuning in to the commercial breaks

Video courses for industry offer a way out of the continuing education jungle. Olga Wojtas reports

In a further initiative, 16 American universities have affiliated to the National Technological University, a private institution founded "to serve the needs of today's highly mobile engineers". NTU grants a master's degree built up through a variety of courses from different universities, and offers courses not only through video but also through satellite transmission.

So far, the satellite courses are not available in Britain. But DLVCs from Stanford and Colorado State universities, MIT and AMCEE are already offered to British industry by a venture set up at Heriot-Watt University in 1982.

Video Course Services was founded jointly by the university and the Engineering Industry Training Board with funding from the Department of Trade and Industry to make the best use of the video medium and to provide a postgraduate and continuing education and economic aid to industry conveniently and economically. There are now some 40 VCS associates, including IBM, ICI, Shell, Honeywell and Ferranti.

Heriot-Watt's director of television, and director of VCS, Dr Ken Stephen, does not apologize for operating licence agreements with US institutions. British industry needs advanced level DLVCs in new and high technology, and at present these are only available from America, he says.

He would have preferred to use British tapes, he admits, but only a handful of British

It is a truth universally acknowledged that if British industry is to remain competitive, it is vital for the workforce to have continuing professional education. But it is also true that there can be marked reluctance from both employers and employees to make use of traditionally taught courses.

Employers not only lose employees' time, but since there is often no suitable course nearby, can face sizeable bills for transport and accommodation. Employees may not wish to leave their workplace because of the demands of their job, family commitments, or because they feel it important to maintain their visibility.

All these disadvantages can be overcome by learning through video courses. Engineers, scientists and managers can update their knowledge without leaving work, and the system is also attractive to employers since the courses' cost is not affected by the number of people taking them.

But when it comes to producing distance learning video courses, British higher education is many years behind the United States. American universities have been producing DLVCs for some 20 years. As for the quality of video education, research has shown no significant difference in the performance of students taught through television and those taught through live lectures.

A number of individual American institutions produce their own material, but one radical move has been the formation of a consortium, the Association for Media-Based Continuing Education for Engineers, by 24 engineering universities, including the Massachusetts Institute of Technology, and Stanford University.

AMCEE offers 400 courses in 16 disciplines such as computer science and engineering, aeronautical and astronautical engineering, business administration, and statistics, mainly at postgraduate level. The AMCEE catalogue, it claims, contains nearly 90 per cent of all nationally available university video courses.

## India tightens rules on MA admissions

from A. S. Abraham

BOMBAY The University Grants Commission has introduced detailed regulations to be enforced from this year, which govern the minimum standards of formal education in various faculties. They will apply to every university and institution deemed to be a university which has been recognized under the 1956 UGC act.

The rules make it mandatory for students all over India to finish a three-year BA degree course before being eligible for admission to the MA. In a number of universities at present, the BA course runs only for two years. However, such universities may, until they switch over to a three-year course, award a pass degree after two years, with the proviso that no such degree-holder will be able to do a course until completion of a one-year bridge course.

The rules lay down that a weekly timetable should include at least 40 hours of work, and that before a student qualifies to sit an examination, he should have attended at least three-

quarters of the total number of lectures, tutorials, seminars and practicals available during the course.

Making a break with the pattern of examinations, the regulations stipulate that, in addition to semester or year-end tests, there will be continuous evaluation during term. Grades obtained in the latter will be shown separately along with a student's rank fixed on a percentage basis. Question papers will be so framed as to ensure that no part of the syllabus is left out of the examination.

The university will not be able to conduct an examination unless at least three-quarters of the course work has actually been completed. Teachers are to have a stricter regimen than hitherto. The will have to be "available" in the institution on working days and, besides teaching, they will have to mark papers, supervise examinations and generally assist students in their academic difficulties. They will also be required to take part in extra-curricular and co-curricular activities. A teacher's workload will include teaching, research, extension work, lecture preparation and the evaluation of regular assignments as well as term papers.

## New status for agriculture

from Wachira Kigotho

NAIROBI Egerton Agricultural College is to become the second constituent college of the University of Nairobi. The new affiliated college will embark on teaching undergraduate courses in the next academic year.

The other constituent college of the university is Kenyatta College, which specializes in teacher education. Kenyatta College is set to become an autonomous university if a bill which is currently being debated by parliament is passed.

Egerton currently offers pre-university diplomas in general agriculture, animal husbandry and horticulture. According to sources close to the institute, the current diploma courses will continue to be taught until degree courses have large numbers of students. Announcing the government decision, President Daniel arap Moi said that the expansion of Egerton College to the status of a constituent college

was in line with the government's aim of expanding relevant agricultural education in the country. He said that while an expanded staff recruitment drive will be set in motion.

Mr Moi observed that the next government move is to make Egerton College the fourth national university. He said the Kenyan government attaches great importance to food production, hence the expansion of agricultural education.

To offset the current manpower shortages at Egerton, the president said the United States Agency for International Development has agreed to provide several scholarships for staff members at Egerton College to pursue Masters and PhD programs in the United States and elsewhere.

Among the courses Egerton is to introduce are crop science, agricultural engineering, food science, animal health and agricultural economics.

Nope - the words don't mean a darned thing...



## Report shows high level of US illiteracy

Sixty million adult Americans - one third of the adult population - cannot read the front page of a newspaper. According to a new report on the problem of illiteracy, released to a Congressional hearing last week, 16 per cent of white adults, 44 per cent of blacks, and 56 per cent of Hispanics are "total, functional, or marginal non-readers".

The report, prepared by the Northeast Midwest Institute, a non-profit research and education group, makes a nonsense of the finding in the 1980 census of the United States that 99 per cent of Americans are literate.

The reason for the disparity is that the census-takers adopted a much lower standard for their definition of literacy: the completion of six years

schooling or the ability to read and write a simple message. Now the criterion is the ability to function effectively in society, and on this level one in five Americans is reckoned to be functionally illiterate.

The problem is getting worse. According to the report, 13 per cent of U.S. high school undergraduates fail to read or write beyond the sixth grade level, nearly one third of young people drop out of school altogether, and 2.3 million people are added to the ranks of the functionally illiterate every year.

There is no national programme to combat illiteracy in the United States. Local efforts are widespread but uncoordinated, depending largely on the efforts of volunteers. Now

that Congress has decided to take notice, however, the situation may change. A joint subcommittee of the Senate and the House of Representatives has been set up to probe the nature, extent and causes of illiteracy, and to find possible solutions.

At its initial hearing, the committee learned that many American soldiers cannot use the sophisticated weapons on which so much taxpayers' money is being spent, because they cannot read the instructions. The defense department is spending \$1,000 per page to convert the manuals into comic books so that the soldiers can understand them.

Overall, the cost of illiteracy to the American economy is estimated at \$225 billion a year.

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is rapidly emerging as the dark horse coming up fast on the rails. It was not among the group of colleges making and it is by no means the best known of the current crop of hopefuls. But, together with Humber College of Higher Education, Dorset is tipped increasingly as the most likely institution to win the backing of the National Advisory Body.

The explanation is largely geographical - there is no polytechnic between Plymouth and Portsmouth and the Bournemouth/Poole conurbation is large and growing - but it is also based on the dynamic character of the institute itself. Since the arrival two years ago of Dr Bernard MacManus as director, the institute's academic provision has been re-examined and in just the vocational and technological thrust which is now expected of public sector institutions.

It has not gone unnoticed at the NAB or the Department of Education and Science, which have been prepared to support the building up of the institute both academically and physically. While other colleges and polytechnics wait frustrated for approval to undertake major building projects, Dorset has been able to proceed with two big schemes. As a result, all departments will soon be located on an entirely modern campus at Wallisdown, on the outskirts of Poole and lecturers will enjoy facilities in keeping with the academic ambitions of the establishment.

A new building, housing an impressive computer unit, a curriculum development unit and staff offices has just been completed. Next comes a £1 million engineering block, approved for construction in 1987/88, which will allow courses to be moved out of older premises two miles away in Bourne-mouth.

The justification for the building programme and to some extent the inclusion in the 1982 list of institutions though that was, some would say it to the institute. Out of the hearth of purpose and a new academic direction. What had been primarily a teacher training college with a few diversified courses became a sharply focused, modern institution geared to local needs.

Dr MacManus would not have chosen to lose teacher training, but he recognizes the beneficial effects. "It says, 'We had to have a close look at ourselves and everyone was determined to succeed."

"It is a very difficult thing to develop



From left, Sir Keith Joseph on a visit to the institute in March, with Mr Tom Monckton, chairman of the governors, Dr Bernard MacManus, the director and Mr Alan Potton, head of engineering.

## Dark horse is a hot tip

John O'Leary follows the changing form of Dorset Institute of Higher Education, now bidding for poly status

new directions in higher education, particularly when resources are constrained and limited. I think we are recasting our academic programme. It has been one of the major features of the institute has developed new strengths out of old."

One symbolic sign of that process has just taken place with the final vacation of the Weymouth campus, which housed the teacher training courses. Although it means the loss of the institute's base in the west of the county, few tears will be shed over the end of split-site operation, particularly since the two campuses were 30 miles apart. Rationalization certainly has not diminished the support received from the county council, which enthusiastically champions the cause for polytechnic status. Nor has it damaged industrial links, which are primarily centred on the prosperous Bourne-mouth area.

Indeed, it is that very prosperity which has played a part in the development of the institute and which is now emphasized in the institute's quest for Bourne-mouth/Poole contribution. The with a population of some 380,000, is one of the fastest growing in the country and is claimed to be the largest population centre without a university or a polytechnic. It belies its image as a

sleepy retirement haven with an array of high technology businesses, which caused the proportion of people in employment to rise by more than 11 per cent during the 1970s while the national picture was of decline.

The economy of the area has been transformed in recent years with some traditional employers, such as British Aerospace, succumbing to the recession but new firms both large and small moving in. Several large computer-based companies, including Plessey, have relocated to south-east Dorset, also attracting small businesses in the high technology field. Several of the leading figures have now been involved in the business of the institute, which is both providing short courses and benefiting from consultancy work as a result.

An annual income of more than £500,000 from research and consultancy work is unusually high for the college sector and the institute also boasts the only Department of Trade and Industry teaching company scheme outside the universities and polytechnics. Staff are actively encouraged to undertake further research and 29 are now registered for higher degrees. An ambitious staff development scheme sees one lecturer in 10 seconded to industry or commerce for a term or more, with the intention of widening the scheme to include technicians.

Even the subjects which are not obviously vocational have been given an edge which caters for the region and the national planners. The example, has been turned into a BA in communication and media production; geography and landscape studies will turn into a degree in tourism as soon as the Council for National

Public sector contract researchers share all the disadvantages of their university counterparts - and more, as David Jobbins reports

membership, and officials privately concede that devoting time and energy to a group of members amounting to barely 0.3 per cent of the total membership is difficult.

It is not to suggest that Natfhe has neglected the research issue. Its negotiators pulled off what researchers regard as a vital agreement in 1980 which provided for nationally-negotiated pay scales. Subsequently they were able to agree with local authorities restrictions on the teaching commitments of researchers covering hours and subject areas.

But the big problem with the 1980 agreement which remains unresolved is the discretion it gave to local authorities on the points of the salary scale to which staff could be appointed.

As Sue Proctor and Sheila Price, both researchers at the Polytechnic of the South Bank, have pointed out, the operation of the discretion to appoint below the Lecturer 1 scale creates severe anomalies.

For example, a researcher at Manchester Polytechnic earns substantially more in their first year than one employed by the Inner London Education Authority in their third.

Their solution is for the union to press for implementation of its existing policy for the abolition of Lecturer 1 scale.

Despite the brief spurt of attention paid to researchers at Natfhe's 1984 conference, it seems unlikely that negotiators will be able to put much

muscle into achieving this generally accepted aim. In this harsh new world union leaders are not convinced the researchers have got their effort involved.

Within Natfhe, only London and the south east has a research staff subcommittee, while efforts to convene a national conference proved abortive despite considerable efforts both by research staff leaders and a national official.

Part of the explanation lies in the uneven distribution of research staff throughout the country, largely as a consequence of the free legal climate prevailing for the five Inner London Polytechnics. No less than 75 of Natfhe's 216 research staff members work in Inner London, with a further 18 in outer London and seven in the south east region.

This block, comprising more than 46 per cent of the union's research membership, is treated as a whole for collective bargaining purposes. Natfhe negotiates with Inner London Education Authority officers who also have the task of representing less enlightened employers in the south east region. Despite being the major employer, ILEA, although its officers are otherwise inclined, is forced to proceed at the pace of some of the least progressive authorities in England and Wales; hence the apparently more indulgent attitude of authorities such as Manchester.

Sheila Price and Sue Proctor, of the Polytechnic of the South Bank have suggested to Natfhe that a fundamental rethinking of the pattern of funding for research posts is needed.

Academic Awards can be presented to give approval. At the same time the hotel and catering school, which is the leading restaurant in the area, as a visiting fellow, has been given recognition of another important industry.

Perhaps more significantly, the developments have taken place in engineering, too. Traditionally, the institute's main strength, but it has excelled in updating equipment and just announced Britain's first power plant in computer-aided engineering. The course has been conceived directly in response to demands from industry and with assistance from locally-based Thorn EMI Robotics. Dr MacManus has taken particular interest in the department, which is now closely associated with the technology industries which are flourishing in the area.

However, it is the breadth of Dorset's course provision which is stressed in its application to become a polytechnic. Apart from initial teacher training, which is an invaluable asset, the institute has introduced all but one of the NAB's 14 academic programme areas. And although not by polytechnic standards, it has a full-time equivalent student population of more than 2,000 last year which makes it among the largest of college sector.

While those students might have reservations about the provision of accommodation - there is none on campus - and recreational facilities they can have few complaints about the academic support system. The library has been expanded to computerized, while the computer facilities themselves, built on three mainframe computers, are extensive and have been adapted to specialist subject needs. Both areas are regarded as full department, giving them a voice in academic policy-making.

The overall impression left by Dorset is one of an institution making the most of opportunities which are not coming the way of most colleges of higher education. Dr MacManus insists that his staff are not obsessively the prospect of polytechnic status, clearly it will come as a considerable disappointment if the bid is not successful. It may well be that the Government does not consider this to be the time to be increasing the number of polytechnics, and the issue may be resurfaced a little too early in Dorset's development. But there is no doubt that the institute is being marked down as one worthy of further support and is certain to be high on the list of candidates if more polytechnics are created.



Felicity Jones visits Wales in the second of a series on university continuing education departments

Two South Wales miners studying at Swansea University's department of adult and continuing education

## Uphill task for the valleys

Professor Gordon Roderick is a deeply pessimistic man.

He might be forgiven for wondering whether he was right to follow his heart back to the valleys and relinquish his post as director of continuing education at Sheffield University for the first chair in the field of Wales at the University College of Swansea.

The clientele for the courses which the university provides extramurally has been driven away by market forces for which, without considerable investment from the university and the Government, there is no road back.

Industry in a once thriving region has been decimated with a sorry catalogue of industrial closures in steel, coal, tinplate, car manufacture and power chemicals. Employment in the mighty Port Talbot steel industry decayed in ten years from a healthy 18,000 in the 1960s to 12,000 by 1979 and now dwindle below 5,000.

Unemployment at 16 per cent is not quite as severe as the average in many other more rural parts of the country. The cruellest figures come in pockets like the Afan Valley where, according to a recent HM Inspectorate report, unemployment is more than 50 per cent for 18-year-olds.

Set against this bleakcloth, traditional extramural work seems curiously out of place. There is no major project for the unemployed in the area but the local authority does provide the facility of attending any class free of charge. Local authority classes are, however, being run down and the university

cannot compete because it has to charge for its courses or it loses the fee due to its responsible body status.

The department is looking for special funding but there is no hope until the autumn. The Government's REPLAN money for work with the unemployed ran out almost as soon as it was announced.

Two years ago when Professor Roderick was lured back it looked as if the university was prepared to put some investment into continuing education but that has fizzled out largely due to financial pressures through the Universities Grants Committee.

At one stage it looked as though the department was to be moved to a site on the outskirts of the city which a third of the 5,000 who enrol said they would be unable to reach.

Now the university's long term plan is to erect a purpose-built home for the adult and continuing education and department of education on the main campus. UGC willing, in the next five to ten years.

Professor Roderick said: "We have got problems which cannot be overcome overnight. You cannot change academics who are philosophers or local historians into money-makers easily."

"The way forward for us is through limited pump-priming money which will enable us to employ the administrative and secretarial staff to do income-generating work which will provide the profits off which the rest of

the extramural activity can be subsidised."

This summer the department ran a fortnight for 30 students from the University of Oklahoma which made a profit and it hopes to repeat it next year. This sort of course, along with plans to move into more vocational and professional diploma work, subsidizes the growth in Welsh-speaking teaching.

"Wales is similar to England in much of its extramural work but it is a foreign country with a culture and language of its own. This is an aspect of our work which needs to be taken into account," he said.

The Welsh-speaking courses account for 25 per cent of the department's activity and form part of a systematic four year cycle which starts with language teaching in Welsh for beginners and can lead to a full university certificate.

The Welsh Office provides a special grant of £6,000 towards this element of the department's courses but the actual cost to the department is at least twice that amount.

The decision to reduce local industry has pulled the rug from under what was previously an important arm of the department, trade union studies and industrial relations.

Mr Eddie Jenkins, senior tutor in industrial relations said that whereas the department used to run eight full day-release courses for 140 students, including three courses for steel workers with the Workers' Educational Association in cooperation with the British Steel Corporation, this has been reduced to 50 students.

"The TUC courses have gone completely, the steel day release are down from three to two and during the strike the miners' courses stopped. Although they start up again in the autumn, the closure of pits in South Wales may affect the numbers", he said.

The courses for miners are often held at the South Wales Miners' Library which opened in 1973 as the outcome of a university coalfield research project which identified the danger to valuable historical material due to the decline of the coal industry in South Wales.

Swansea University College academic development committee working party has presented the department with a definite blueprint for the future which will involve a major shift.

The working party has said that it wants a decrease in the proportion of work in liberal education and an increase in income-generating work. More teaching is to be carried out by staff in other departments and it is being recommended that the number of permanent staff in adult and continuing education should be reduced as soon as possible.

For all the reasons that have gone before, this will not present an easy task and will be a sad loss to some of the region's problems.

The inspectors' report on the Afan valley provision provided conclusive evidence that adult education provision is less than satisfactory. Inflexibility in class scheduling and lack of coordination between the various providers were two of the reasons given for gaps in the service.

In the guarded words of the Inspectorate everything is not alright with the general adult education provision in West Glamorgan. Certainly it is insufficiently incomplete to query the university's view that it can afford to decrease its liberal education service.

## Bailey's bridge to an understanding of policy

Stephen Bailey was one of that fraternity of distinguished policy analysts who in recent years have clustered in the graduate school of education at Harvard. He had a clear but undogmatic view of how processes worked, and what, in educational analysis, most helped to explain what. One of the enterprises in which he was engaged when he died was a study of key American values as expressed in American schooling, past and present. He recruited Marvin Lazerson as a historian to take part, and Lazerson and colleagues have now completed the work - a modest but important book, *An Education of Value*. As a statement of "the purposes and practices of schools" it could not have come at a better time, for the future of educational debate in the United States and elsewhere.

Neither in the US nor in Britain have we been short in the past few years of statements, manifestoes, pronouncements, programmes. Since the Black Papers conquered the field in the late 1960s and 1970s, and the Thatcher government set off in pursuit of such aims at the end of the 1970s, educational policy has not, however, been notable for its sensitive or sophisticated understandings. Whether radically right or left, or hesitantly middle, there is little sense to be had that policy analysts or promoters have reflected or learned from the relevant, recent past.

Ken Jones, in one of the few real attempts at re-exploration (in *Beyond Progressive Education*), points to the Labour Party's radical programme of 1982, but wonders what it really meant - simple modernization or radical reform? And there are substantial numbers of Joseph-watchers, UGC- or NAB-observers, Green Paper-chasers, eager to discover whether the latest positive means negative, add means subtract, economics means policy, and policy means ideology. And policy analysts is not exactly a major British industry.

Given the loss of educational vision - what a pity that utopia became an unfashionable and even dirty word! - and even purpose in the past decade it has not been easy to know where to look for help. Someone like Paulo Freire, sending out provocative and incisive messages in the early 1970s becomes in his recent *The Politics of Education* convoluted and frequently boring and pompous. His previous trail of stimulating insights into education as it is and might be includes most memorably his thesis in *Pedagogy of the Oppressed* about education as an "act of depositing, in which the students are the depositors and the teacher is the depositor." This is the "banking" concept of education.

But nobody is helping us to go on from such insights and relate them to our current uncomfortable realities. What we have had instead is the dominance of a flat-footed politics of education - for - economic - growth which, important though its aspirations are, has been pursued in forms which have prevented thinking about educational processes and change. The most representative texts of the 1980s have been, here as in the US, juggling feats, efforts at accommodation, exercises in ambiguity.

The torrent of American policy documents in the last two or three years contains a large percentage of such exercises, attempting to re-possess the field of excellence, often promoting the obvious through the platitudinous, or re-inventing vocabularies. Something needed to be done to improve education and no one wanted to appear to be too short-sighted or narrow-minded, and the meanness of snack solutions therefore easily became dressed up as a banquet.

Some serious research and analysis has gone into the new thrusts - Ernest Borer or John Goodlad on the high school, and thoughtful panels of higher education commentators, for example. But the extent and length of argument about what may mean, actually said, indicate how high are the pillars of ambiguity on the two sides of the Atlantic.

Stephen Bailey was above all concerned with process, escape from the over-simple, immediate explanation. Lazerson and his colleagues have - often from a political perspective that might not have been Bailey's - done what Bailey wanted. The current dilemmas of American education are traced back, briefly but persuasively, to processes of conflict and consensus, social change and school conservatism, popular expectation and structural inequality, the shifting meanings of equality and excellence, which have governed the emergence of particular sets of definitions and emphases. The book tries to suggest, above all, a way of learning lessons from the failures of the recent past - without glamorizing or evading.

Out of case studies of curriculum reform they take important critical threads - for example, from *Man: A Course of Study* and new maths looking at motivation, peer-group opposition, publisher conservatism, curriculum planning and its cultural contexts, including the responses of teachers. Here, as in other cases, they explore what one educational purpose does to another - particularly the tension between access and equality on the one hand, and quality and curriculum on the other and re-emphasize a commitment to both.

They tackle computers and teachers' pay and discussion of educational goals, labour markets, the relationship between skills and creative learning, and the range of issues which, in one guise or another, infuse all our debates. The success of the book, and my attraction to it, lie not in any structured programme it offers, but in the seriousness of its effort to back-track and confront, and understand. This is a proper use of history - within the argument, informed by a methodology capable of penetrating our recent yesterday and testing our commitments.

There is desperate need for such re-examinations of schooling and wider educational processes. A recently established Public Education Network points, in a slimline version, in the same direction in Britain. Its pamphlet entitled *Public Education for a Democratic Future* suggests the beginnings of a programme also from a presentation of the potentials as well as the weaknesses of recent decades of educational effort.

It suggests what was learned in the years after the Second World War, "not that education is the agent of all change, but that constructive, long-term change is inconceivable without democratic participation of all concerned with it." It indicates that "the narrowing interpretation of education in the 1970s and 1980s pointed towards a precipice of hopelessness." It offers a commitment which is conceived as "part of the process of reversing that direction."

Networks like Education for a Democratic Future, and analyses in greater depth like *An Education of Value*, re-open the past. Without commitment like Bailey's to rediscovering and reinterpreting the processes that brought us to here, the field belongs to the over-simple, and - to combine the metaphors - ends at a precipice.

## Poor relations of poor relations

University contract researchers have - with some justice - regarded themselves as the poor relations of their sector of higher education. Insecure, low salaries and a lack of any agreed career structure for people seeking a teaching job conspire to consign them firmly to the bottom of the pyramid.

Until, that is, the plight of their counterparts in the public sector is considered. They share all the disadvantages and can identify several more. They are fewer in number and therefore lack the political clout within the main union organizing in the sector, while above all polytechnic research is unarguably a very pale reflection of university activity.

There are welcome signs that the climate of opinion in which polytechnics were regarded as exclusively teaching institutions may be changing. Clear indications have emerged from the Council for National Academic Awards and Her Majesty's Inspectorate that healthy research is a necessary precondition for high-quality teaching, and the so-far modest allocation of £2.5 million, admittedly on a selective basis offering no hope of sector-wide dual funding, is beginning to respond. It was inevitable at a time of tight budgets and a relatively small injection of money that the initiative should be selective. Even the main union in the sector, the National Association of Teachers in Further

and Higher Education, while it called for more finance to build up research in the public sector, made clear in 1980 that research staff should not be appointed at the expense of teaching resources.

In the scramble for priority treatment which follows any initiative, however small, the chances of contract research staff winning major victories are remote.

While the universities have about 10,000 contract research staff, the public sector numbers its researchers grown substantially. There was, for example, a 55 per cent increase in externally funded and 38 per cent increase in internally funded research staff between 1980 and 1984. Although teaching staff numbers have fallen, research staff now form per cent last year compared with 6.7 per cent in 1980.

If the numbers have increased, according to the Committee of Directors of Polytechnics survey, union membership has fallen considerably. The union which bargains on behalf of contract research staff in the public sector is the 75,000-member National Association of Teachers in Further and Higher Education. According to figures drawn up for its research staff subcommittee, it had 216 on its books in March this year, and 368 in 1982.

Natfhe has to work within its resources and determine priorities to the greatest advantage of its wider

membership, and officials privately concede that devoting time and energy to a group of members amounting to barely 0.3 per cent of the total membership is difficult.

It is not to suggest that Natfhe has neglected the research issue. Its negotiators pulled off what researchers regard as a vital agreement in 1980 which provided for nationally-negotiated pay scales. Subsequently they were able to agree with local authorities restrictions on the teaching commitments of researchers covering hours and subject areas.

But the big problem with the 1980 agreement which remains unresolved is the discretion it gave to local authorities on the points of the salary scale to which staff could be appointed.

As Sue Proctor and Sheila Price, both researchers at the Polytechnic of the South Bank, have pointed out, the operation of the discretion to appoint below the Lecturer 1 scale creates severe anomalies.

For example, a researcher at Manchester Polytechnic earns substantially more in their first year than one employed by the Inner London Education Authority in their third.

Their solution is for the union to press for implementation of its existing policy for the abolition of Lecturer 1 scale.

Despite the brief spurt of attention paid to researchers at Natfhe's 1984 conference, it seems unlikely that negotiators will be able to put much

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# Whose baby?

The brief of the Warnock committee on human fertilization and embryology was to consider the social, ethical and legal implications of new medical and scientific developments in human reproduction and to make recommendations to government concerning them. Surrogacy (along with embryo research) was one of the most controversial issues it encountered. The committee disapproved of surrogacy and recommended the introduction of criminal laws to control and suppress it. However, many people would think that surrogacy should be allowed, at least in some cases, to alleviate infertility.

Surrogacy has to be considered alongside other methods of alleviating infertility. Artificial insemination by donor (AID), egg donation and embryo donation are particularly relevant. These practices give new urgency to the question "who are the child's parents", which is crucial to the problem of surrogacy.

The Warnock committee recommended that the husband of an AID mother, if he agrees, should be considered to be the father of the child and that the sperm donor should lose all rights and duties with respect to it. It also recommended that egg donors and embryo donors should have no rights and duties concerning the child and that the woman who gives birth to the child should be regarded in all cases as the child's mother.

This is all very well where we are concerned with donated gametes or embryos. But what are we to say if an embryo is transferred for gestation to the uterus of a "gestatory surrogate", the embryo having been supplied but not donated by the commissioning couple with the intention that they should bring up the resulting child? (This need not be a commercial arrangement.) Again Warnock proposes that the woman who gives birth to the child should be considered to be the child's mother. Many will feel that this would be an injustice to the commissioning parents.

The Warnock committee has overlooked certain important principles here. These are, first, that genetic parents are the initial holders of parental rights and duties as the producers of gametes and, second, that these rights and duties can be surrendered and transferred by donation of gametes and embryos. It is gametes and embryos are transferable. These principles make it clear at once why we agree with Warnock concerning donation and why we might not agree with the *ad hoc* ruling concerning gestatory surrogacy.

In genetic surrogacy a woman produces her own progeny for the commissioning couple and most people would think that, as the natural mother, she is the child's true mother.

The University Grants Committee and the universities are presently engaged in an exercise which involves an attempt to derive criteria by which the universities' research performance might be evaluated. Some interest has been shown in the possible relevance and use of citation indices as indicators of research performance.

The attractions of employing a measure of performance based on citation are clear. The concept of citation is understood in the academic community and citations can be counted. So, in an acceptable way of assessing the impact of the work of a scholar or researcher, and citation indices are unexceptionable means of assessing research performance. However, citations are not the innocent units of measurement they might appear, and the problems of employing them as a measure of research performance are far from trivial.

Eugene Garfield, the founder of the Institute for Scientific Information - which produces the most comprehensive databanks of citations considered the question of citation frequency as a measure of research activity and performance, and pointed out that "in man's work, the number of citations of a piece of work is not a measure of significance. Like one scale on a nomogram, it must be used along with other scales to obtain anything useful or meaningful, particularly if the object of the evaluation is in any way qualitative". But it is not merely that citations

The important question here seems to concern the surrogacy agreement. Should it be binding or enforceable? Warnock takes a firm line on this and calls for a statutory ruling that no surrogacy agreements shall be enforceable. But this would be rough justice where the egg is fertilized with sperm supplied, but not donated, by the husband of the commissioning couple. The issue of the surrogacy agreement is clearest in "total" surrogacy where one (married) couple agrees to have a child in the ordinary way for another couple. If the commissioning couple have a claim to the child in this case it must be entirely because of the surrogacy agreement. However, this generates a special problem. The agreement seems to be tantamount to an adoption agreement but the law does not allow privately arranged adoptions. An adoption can only take place on the order of a court and no kind to prevent the question of whether an adoption order should be made or not.

The underlying principle here is that children are not transferable which contrasts sharply with the principle that gametes and embryos are. It seems to follow from the principle that children are not transferable that children or total surrogacy agreements could not be binding or enforceable. Yet gestatory surrogacy agreements could be considered binding as the embryo there belongs to the commissioning parents from the outset.

Now it would be unsatisfactory to allow gestatory surrogacy while barring genetic and total surrogacy. However, this can be avoided. An egg or embryo could be donated without it being removed from the woman's body. This might be called donation *in utero*. The effect of donation *in utero* would be that the embryo or resulting child could be considered to belong to the commissioning couple from the outset, thus removing any question of it being transferred to them by adoption at birth, or soon after. There would then be no breach of the principle that children are not transferable and therefore could not be the reason for refusing the surrogacy agreement moral or legal recognition. It is unlikely that surrogacy agreements have ever been drawn up in these terms, but there is no reason why incoherence in the idea that an egg or embryo might be donated while in the body.

It might be thought to be absurd or senseless to suppose that the child might belong to the commissioning couple during gestation. But in normal parenthood a child belongs to his father as much as to his mother during gestation. Of course the gestating mother has rights and duties which the father does not have. But that does not



Baby Cotton: born to surrogate mother Kim Cotton amid controversy.

imply that the father is not the child's parent or that the child does not yet belong to him.

The commissioning couple could be considered to be the parents of the child during gestation just as a normal father is considered to be a parent at that time. They would have to accept that the surrogate is in a privileged position concerning certain decisions affecting the child. But that would not negate the idea that they are the child's parents.

In a system or practice of surrogacy in which a woman could donate an egg or embryo *in utero* there would be a problem of where to draw the line between embryos or fetuses that may, and fetuses or unborn children that may not, be donated or transferred.

(This is not the same problem as that which arises in connection with abortion or fetal research.)

The only rational and practically workable place to draw the line would be before conception or fertilization. A clear and simple rule would be that embryos can only be transferred or donated by agreements entered into at a point clearly before conception. Such a rule would point up an important distinction between adoption and surrogacy which could change our attitudes to surrogacy.

Surrogacy tends to be treated as a form of adoption because, under existing laws, the commissioning couple must hope to adopt the child from the surrogate mother, its legal mother. However, if the law recognized agree-

ments whereby a woman donates an egg or embryo *in utero* before conception, the embryo could be considered to belong to the commissioning couple from the outset and the resulting child would then be theirs. At this point then there would be a question of the child being transferred or adopted from adoption. Of course, there is a common factor that both surrogacy and adoption are ways for people to acquire children. But adoption is primarily concerned with arranging for existing children who need parents whereas surrogacy is concerned with the production of children for parents or would-be parents, who want the child.

Adoption in this country has long regard for the interests of adoptive parents. It exists primarily to deal with the social problem of parentless or unwanted children. By comparison an institutionalized system of surrogacy would naturally have the interests of the commissioning parents as its concern. Of course, everyone is concerned that surrogacy should not be children at risk. But surrogacy is essentially aimed at meeting the needs of the commissioning parents, not merely infertile couples. Unless their needs were allowed to be met surrogacy children would not exist. A surrogate child is clearly a wanted child.

Parenthood by surrogacy would be closer to normal parenthood than it is possible for adoptive parenthood to be. Human parenthood cannot be understood without taking into account the characteristic motive of creating another human being. The creative role embraces both begetting and rearing the child. Adoptive parents forgo the begetting of the child. Of course, they love and care for their children as other parents do. But for those who seek adoption as a solution to their infertility it is bound to be second best to natural parenthood because of the absence of the protective role.

Surrogacy allows this protective role to be exercised - in varying degrees, depending on the particular form of surrogacy. But in all cases, under the concept of surrogacy developed here, there is the fact that for the commissioning parents the child would not have been brought into existence. This singular fact might be missed if surrogacy is not clearly distinguished from adoption.

Of course, a system of surrogacy could be open to abuse especially if under it surrogacy was allowed to become commercialized. But that would be the case of adoption or even natural procreation if there was no regulation of these practices by law, social rules and conventions. Like adoption, surrogacy would need the benefit of regulative institutions. If the argument above is right, these regulative institutions should be based on a notion of surrogacy as facilitating a close approximation to normal parenthood rather than as an unnatural and unwholesome substitute for it.

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## Citing the obvious

qualitative analysis of the scale that would be required for evaluating the research performance of a university or an academic department would be immensely complex, time-consuming, and in the context of the need for a simple measure - ultimately self-defeating.

The difficulties involved in under-taking a simple and fair citation count are greatly underestimated - partly because of the widespread lack of knowledge as to the manner in which the available databanks of citations are collected. The most likely candidates for employment as the databanks for a large scale evaluation of research performance are citation indices produced by the Institute for Scientific Information, the Science Citation Index, Social Science Citation Index, and Arts and Humanities Citation Index. In their role as devices for locating important bibliographical references, they are excellent. But, when employed outside their straightforward role they have serious deficiencies.

In the first place they are highly selective so that although they cover a very large number of publications they can by no means be considered to offer comprehensive coverage of the subject areas they index. There is a heavy bias toward journals as opposed to mono-

graphs, and to "core" sources. If an area of research is reported and cited in a very restricted and specialized literature, or if a subject area disseminates research findings principally through working papers, laboratory reports, and these do not appear as, or are widely cited in, sources covered by the services, then these subject areas might find themselves embarrassingly invisible in these indexes - as will who are not first cited.

In their use as indexes at worst it is inconvenient if the source in which a researcher has been cited is not covered - it becomes very much more serious if the next research grant of the reputation or continuation of a British academic department is dependent on the policy of coverage of an American secondary bibliographical service.

The employment of citation indices as research indicators also contains an inherent bias in terms of the kind of research output which comes into the evaluation equation. Concentration on citation indices is oriented towards publication and services rather than patents or a service may be seen as the most important objective - and the

production of a report of only secondary importance. Such research may or may not be widely cited, that is not the point, for the researcher may nevertheless attract considerable sums of money from organizations not particularly interested in the citation paper chase. Employing citation as an indicator of research performance would seem to offer a positive disincentive to research in areas which had a high potential for applications but which were less likely to be widely cited in academic journals.

The implications of the choice of indicators of research performance need careful consideration. Any bias inherent in the criterion of measurement employed may lead to a corresponding bias in the type of research undertaken. Attention needs to be directed to the question of what the likely effects might be of the long term direction and nature of research carried out in the universities from the choice of indicators.

It would be a sad irony if, in the attempt to evaluate research effectiveness, universities undermined some of their effective research. The use of citation indices in such a role seems fraught with difficulties and potentially damaging.

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On August 27, 1945, 12 days after the end of the Pacific War, the late Japanese prime minister Shigeru Yoshida wrote to Kumao Harada, an imperial courier:

"I thank you for your letter. I think the situation which should occur has at last occurred. If the devil has a son, surely he is Tojo. Until now, the way in which Japan was defeated was one of the best examples in history. We could reestablish the empire out of this way of defeat. If we extract by operation the cancer of politics which is called the military, then politics will be clean and the nation's morality will be enhanced and the whole machinery of diplomacy will be renewed. Not only that, science will be developed, business will be reestablished with the introduction of American capital, and in the end, the empire will exercise its latent capability. If so, it is not so bad to be defeated in this war. After the rain, sky and land will become more green."

As the late prime minister anticipated, by extracting the "cancer of the military" Japan was able to establish a stable democracy and reestablish her economy. Yet Japan should not forget the fact that she was only reestablished as a nation out of defeat.

After writing his letter, Yoshida began the transformation of Japan's national goal from the pre-war philosophy of *Fukoku Kyohei* (enrich the nation by strengthening the military capability) to the post-war *Fukoku Jiyukhei* (enrich the nation by minimizing the militaristic capability). Although this new policy has been strongly criticized, especially by conservative groups in the USA in recent years, it has been firmly observed by successive Japanese governments, including the Liberal Democratic Party's governments up to the present Nakasone cabinet.

Successive prime ministers consistently declared that by building up a big economic power without big military capabilities,

## Rising sun after the rain

Rei Shiratori looks at Japan's policy of building up her economic power while decreasing her military capabilities

ties, Japan could make a new model of development for other nations. They considered that by improving the economic situation they could make Japan one of the most politically stable countries in the world and that, by retaining political stability in Japan in this way, the free world, including the USA, could benefit by finding the most reliable alliance to face insecure world situations.

In a situation, though, where only Japan can enjoy economic stability and prosperity while other Western nations are suffering severe economic depression and unemployment, it may be necessary for Japan to reevaluate the *Fukoku Jiyukhei* model and, where necessary, modify it.

Need for modification, however, does not mean that Japan should completely abolish the model as the national goal. It should mean, rather, that Japan should more actively and positively exploit the merits and the results of *Fukoku Jiyukhei* to improve the world situation. If Japan cannot discover appropriate modifications to the original post-war model, then her efforts to build up an economic power without big military commitments will be reduced to ashes.

Following the spirit of Yoshida's model, it will certainly be necessary for Japan to make more effort to expand free world trade, even if the Japanese government faces difficulties in persuading certain groups within the country. In order to exploit Yoshida's philosophy actively, it will also be necessary for Japan to increase drastically the level of economic assistance to developing nations. The net Official Development Assistance from Japan

to the developing world and multilateral agencies in 1983 reached only 0.33 per cent (\$3,761) of gross national product in spite of the fact that the Organization for Economic Cooperation and Development set the desired goal of ODA at rather more than twice that percentage. Neither should Japan forget countries such as the Netherlands (with 0.91 per cent) or Sweden (0.88 per cent, whose ratio of assistance to the gross national product exceeded 0.8 per cent; set against that, Japan's share among total ODA as given by the countries of the Development Assistance Committee reached 13.7 per cent in 1983).

The drastic increase of Japan's economic assistance towards developing Asian countries is especially appropriate when we consider the fact that Japan's is an Asian economy and that political instabilities or insecurities in developing countries always occur due to inferior economic situations. It might also be worthwhile to mention here that the drastic increase of Japan's economic assistance would decrease the financial burdens of the European developed nations who are currently facing economic problems.

It should also be worthwhile for Japan to establish a new international scheme of development assistance in Asia, a new Asian Development Fund which would be freely accessed by developing countries to foster their own native industries under their own initiative. If we consider the fact that Japan's GNP reaches more than the total amount of GNP of the Pacific Asian countries except China, then Japan should bear the financial burden of this fund. Perhaps Western coun-

tries could also give financial help by contributing a certain amount out of the profit acquired by their trade with these Asian countries.

Japan's efforts to initiate new multilateral agencies in international society should aim at the development of intermediate groups which consist of middle-sized countries such as Australia, Canada and EEC countries. One of the problems faced in international society today is that both the superpowers act as destabilizing factors.

Changes in American foreign policy accompanied by shifts in presidential attitude cause serious confusion and distrust all over the world, in keeping with the scale of US influence on the world situation. What is urgently needed is a powerful and effective coalition of middle-sized countries to serve as a stabilizing factor in international society and to cancel out sudden changes of global policy.

It is also necessary to understand more closely the domestic situation in both Western Europe and the Pacific

nations. The problem of language still causes trade conflicts between Japan and Europe. While the Japanese routinely translate important Western books, the process is not reciprocated; European businessmen seldom do their business in Japan using Japanese.

Perhaps Japan should make unilateral efforts to introduce culture and to explain the Japanese situation to Europeans by exploiting the merits and fruits of the old *Fukoku Kyohei* model, even if these efforts might be criticized as a new expansionism. If Europeans make no effort to understand Japan, we Japanese might be able to ask Europeans to take the same attitude as the Japanese took at the end of the war. Prime Minister Yoshida described it thus in his *One Hundred Years Which Decided Japan's Destiny*:

"Just as those Samurai opened up Japan when they failed to expel the Westerners and when they realized the superior capability of Western people in 1868, so the Japanese who were defeated in World War II frankly admitted in the same way the virtues of their enemies."

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## A shrimp turns into two dolphins

August 15 is an auspicious day for 60 million Koreans. This year's anniversary is especially significant, since it marks the fortieth anniversary of Korea's liberation from Japanese colonial rule. Fittingly, this date is celebrated as a public holiday throughout Korea. And yet, even as they commemorate their freedom, Koreans everywhere cannot but rue the extraordinary twist of fate which, in the moment of their liberation, split their land in two: a division which has already lasted 40 years, including a devastating war; and which only now begins to show some faint signs of being healed.

It is worth recalling just how Korea came to be divided. In essence, this was part of the broader fallout from Hiroshima and Nagasaki. Japan collapsed much sooner than had been anticipated, and Soviet troops were already moving across the border and down the Korean peninsula. Something had to be done, fast. According to one version, two young US officers (one of them a Major Dean Rusk) were given a small map of East Asia, a ruler, and half an hour in which to find a viable line of division to put to the Russians. What they came up with was the 38th parallel; and, somewhat to US surprise, the Russians agreed.

Thus it was - casually, rapidly, and of course "temporarily" - just to sort out who would accept the Japanese surrender - that an ancient and homogeneous nation suddenly found itself chopped in half. That inherent division endured, and Korea became one of the first casualties of the cold war. Five years later an infinitely worse disaster befell the nation as the cold war turned hot. Three years of war killed several millions of Koreans and others and displaced millions more; while bombs and napalm reduced much of the peninsula to rubble or stubble.

That war is still not officially over: there was an armistice, but as yet no peace treaty. And its scars still linger, although not so much physically. Koreans north and south have largely rebuilt their shattered land. The ubiquitous hills are green with reforestation, while high-rise buildings mark the skylines of Seoul and Pyongyang alike.

Yet all this has been achieved in the context of a division which if anything has hardened, and whose absolute is not widely appreciated in the West. The Berlin Wall is Piccadilly Circus by comparison. West and East Germans can watch each other's TV, write, telephone, and (within limits) even visit each other. Koreans - not even a defeated aggressor nation - may do none of these things. At least 10 million close relatives are divided, and have heard nothing of each other for over 30 years.

Really, it is an extraordinary situation. And the fact that the world (including Koreans) has for 40 years learned to take for granted these entities called "North Korea" and "South Korea" should not prevent us from taking the longer view and putting it all in context. Looking backwards, first of all: no doubt the young Americans who so lightly sundered this ancient land had no idea that Korea had been a single united political entity since AD 668 - the year when the Silla Kingdom in the south east, having already subdued Paekche in the south west, finally conquered its northern rival Koguryo.

That sort of pedigree makes most European states - never mind American - look like parvenus. Equally, Koreans have a distinctive and rich culture. They invented moveable metal type two centuries before Gutenberg; and served as a conduit by which Japan acquired much of its culture from China. Only the past century has with bitter irony reversed this relationship. Korea's response to the encroachment of the West and modernity was to bathe down the hatches, earning it the sobriquet of "hermit kingdom"; no Meiji restoration here. As a result, it fell prey to its old enemy: Japan. In effective control from 1905 and from 1910 instituted a colonialism whose effects were typically ambivalent. On the one hand, a modern infrastructure was built, and agriculture, mines, and some industries were developed. On the other hand,

Forty years ago this week, the Allies liberated Korea - and divided it. Aidan Foster-Carter argues that in 1985 (unlike 1945) it is Koreans who have the power to put their country together

few Koreans benefited. Not surprisingly, after the traumas of colonization, division and war, Koreans today have a strong sense of themselves as impotent victims of history. Perhaps geopolitics alone would have ensured this. Throughout its history, Korea has been surrounded by powerful neighbours: always China and Japan, and in modern times also the USSR and USA. Small wonder that, as a Korean proverb has it, "when whales fight, the shrimp's back is broken".

Yet even as Koreans gloomily contemplate the fortieth anniversary of their division, perhaps it is time for a fresh look. For 1985 is not 1945. In the interim, both the global context and Korea itself have changed almost out of all recognition. True, in 1945 Koreans were victims. But even as early as 1950 they were also agents - at least if you believe, as I do, that the war was Kim Il-sung's last ditch effort to reunify the country Silla style, rather than Stalin's global strategy.

And Koreans have increased their power steadily since then. The North Koreans boast about it more (and indeed exaggerate it) with their concept of *juche*, or self-reliance. If for nothing else, we should surely give Kim Il-sung credit for his achievement in keeping a small country under the shadow of the Soviet embrace - and this despite his own Soviet-sponsored origins in 1945. In Moscow as in Beijing, they know North Korea is not to be trifled with.

South Korea on the surface presents a different picture, always stressing its close alliance with the USA (40,000 of whose troops remain there, while North Korea has no foreign forces) and, more ambiguously, Japan. Yet this appearance is deceiving: certainly to North Koreans, who ludicrously profess to consider the South a US "colony", and perhaps also to South Koreans themselves. For this is an enormously strong country: not just militarily, but above all economically. While

North Korea's once promising industrialization now seems stagnant in the absence of a much-needed opening up and economic reforms, South Korea's goes from strength to strength.

Meanwhile, the global context has also been transformed. China, still probably North Korea's closest ally despite a recent Pyongyang "tilt" towards Moscow, is now best of friends with the USA - and even, surreptitiously, with South Korea. And it is no doubt China which deserves most credit for the peace process which has been fitfully under way in Korea for the past two years or so. Since the North Korean attempt to blow up Chon Du Hwan in Rangoon in October 1983 backfired so badly, Pyongyang has tried a different tack. Several, in fact: for even while formally wishing to talk first to the USA and South Korea, in fact eating its words and already engaging in bilateral talks with the South on no less than three levels: Red Cross, economic, and parliamentary. All this came out of an astonishing breakthrough last September, when Pyongyang offered and Seoul (remarkably) accepted "aid" to flood victims in the South.

None of these talks has yet achieved anything substantial. It will be a long hard road, with years of mutual mistrust to be overcome. And yet, unlike in 1985, if the division of Korea persists then Ko-

reans have only themselves to blame. For the plain fact is that this nation now has the two strongest states it has ever known in its long history.

If both governments were finally to get serious about reconciliation, let alone reunification, who could actually stop them? All four great powers would like to see at least a reduction of tension, a "Germanization" which would certainly be a vast improvement on these past 40 years. But Koreans themselves have the power not only to do this, but to go further. In the long run - another 40 years, say - they could create an "Austrianized", reunified Korea; its neutrality and independence guaranteed equally by four-power agreement and the merger of two of the world's most formidable armies.

Such a scenario may seem far-fetched. But then, who anytime up to 1945 could have foreseen the division of Korea? And for what good reason, in 1985, should Koreans continue to be arrayed against Koreans? To move in such a direction will take courage and imagination. In Seoul and Pyongyang equally. It will be a start if they forget about shrimps, and recognize themselves (and each other) as the dolphins they have become: intelligent and agile, they should be able to run rings around all the whales.

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# BOOKS

## Revising the industrialists' record

by Richard Bessel

German Big Business and the Rise of Hitler  
by Henry Ashby Turner, Jr  
Oxford University Press, £25.00  
ISBN 0 19 503492 9

For nearly two decades Henry Ashby Turner Jr has been engaged in a crusade to set the record straight about big business and the rise of the Nazis. In a series of provocative articles Professor Turner has sought to demonstrate that German big business did not play the paramount role in Hitler's coming to power so often attributed to it, and that many historians who have asserted otherwise have got their facts wrong. Now, finally, his long-awaited book has appeared. It is clearly intended to be the last word on the subject - an attempt to lay to rest what Professor Turner regards as "myths, preconceptions, and the misuse of history". It is a carefully - almost obsessively - well-documented study of the relationship of big business interests to Nazism before 1933, and a challenge to those who regard politics largely as a function of economics. This is a book which will arouse strong reactions, and one which cannot be ignored.

In essence, Professor Turner has set out to demonstrate three things: that German big business did not bankroll Hitler to any significant extent before Hitler became Reich Chancellor; that the Nazi Party was able to generate the massive amount of money necessary for its hectic propaganda activities by itself, from its rank and file and from those who paid to attend its many rallies; and that big business influence was not decisive in the machinations which destroyed Weimar democracy and brought Hitler to government. To do this, Professor Turner first outlines the position of big business during the Weimar period, and then proceeds to a painstakingly detailed account of contacts between businessmen and the Nazis, of the many contortions of Nazi economic "policy" before 1933, and how the Nazis actually managed to finance their political activity.

In sketching the position of big business during Weimar, Professor Turner relies heavily on the work of others - in particular Gerald Feldman and Bernd Weisbrod - and produces a picture which is neither terribly new nor very flattering of big business: of businessmen ill at ease with the political institutions of the Republic, and of business hostility towards the left and towards Sozialpolitik - the social welfare measures enacted during the Republic. As Turner notes, by the end of the 1920s Germany's big businessmen were serving notice that it no longer was possible to maintain the political compromise between Sozialpolitik on the one hand and the requirements of policy on the other. Overall, the business community's prescription for countering the depression called for a

sweeping rollback of a decade of republican Sozialpolitik.

The problem was how to bring this about. Here Professor Turner turns to his blow-by-blow account of attempts by big businessmen to influence political developments and of the contacts between big business and the Nazi Party. In the process, he has followed up just about every allegation of big business support for the Nazis, and the results of his detective work are revealing. According to Turner, in virtually none of the cases where it has been asserted that big business played a major role in financing the Nazis or bringing influence to bear on their behalf are the claims conclusively borne out by the documentary evidence. What is more, he asserts that many people who claim otherwise have unwittingly or unwittingly allowed serious errors to creep into their work. The authors of books in which Turner has found errors comprise almost a roll call of historians of modern Germany: Karl Dietrich Bracher, Alan Bullock, Joachim Fest, Arthur Schweitzer, A. J. P. Taylor, John W. Wheeler-Bennett and Gerhard Schulz (among others), as well as virtually the entire East German historical profession.

In contrast to many others who have written on the subject, Professor Turner finds that in the political developments which led to the end of German democracy between 1930 and 1933 "big business remained a passive, poorly informed bystander". On the whole German big businessmen were unable decisively to influence political events, and only in 1932 were they able to transcend their many divisions and present a united front - to support Franz von Papen, who aimed to dismantle both the Weimar Sozialpolitik and the political order that had given rise to it, but who lasted only a few months as Chancellor despite the virtually unanimous support of big business.

As regards the Nazi Party, big businessmen blew hot and cold, generally favouring (and channelling money to) the more conventional bourgeois and conservative parties and often expressing extreme misgivings about the radical noises emanating from various Nazi spokesmen about what would be done with the economy in the coming "Third Reich". Among big businessmen, committed followers of Hitler were a tiny minority. The Nazis gained stronger support from among smaller and mid-sized industrialists, who could not expect generous state aid in the event of difficulties and whose backs really were against the wall. Here, as with the Nazis' advances among the rural population, one can see the growth of the Hitler movement as a political rebellion against the old elites who seemed to have had things their way for so long. Big businessmen, however, found one of the groups with the greatest reserves of their problem was what to do about this strange phenomenon which they had not created and could not control but which



MILLIONEN stehen hinter mir

A 1932 photomontage by John Heartfield captioned "Millions stand behind me" - the meaning of the Hitler greeting depicting the view, challenged by Professor Turner, that big business financed Hitler's rise to power.

had become a leading contender for political power.

If big business did not play a major role in lifting Hitler into the saddle, how then did he get there? According to Professor Turner, the answers lie not in the realm of economic influence but in the "political sphere": in particular, in the way in which Paul von Hindenburg conducted himself as Reich President during the final Weimar years as "the presidency came increasingly under the influence of an irresponsible camarilla in which the military leadership played a key role, making and unmaking a succession of cabinets that governed by presidential decrees". In Turner's opinion, "a

primacy of politics, not a primacy of economics marked the realities of late Weimar Germany."

Two critical observations can be made about Professor Turner's approach. First, insufficient attention is given to the influence and interests of the military. The military plays a crucial role in Professor Turner's explanation of the collapse of the Weimar Republic: indeed, Turner seems to be assigning to the Reichsmilitary the role in destroying Weimar democracy that many have assigned to big business. Yet there is virtually no discussion of the interests of the military at this time; it is assumed through the last Chancellor before Hitler and the man whose intrigues did so much to

pave the way for the catastrophe of January 1933 - noted as the representative of military interests, although recent work by Michael O'Gara has suggested a rather different picture of the Reichsmilitary's concerns in the early 1930s; and Professor Turner runs the risk of presenting an undifferentiated picture of the military as he accuses others of having done with regard to big business.

Second, and more important, Professor Turner displays extreme hostility towards attempts to place the collapse of German democracy within a broader theoretical perspective. The last ten pages of his book, the second half of the conclusion, form a frontal attack on those who choose an approach to the subject within a different framework than he has. This detour from an otherwise fine piece of historical research.

Certainly many people who have examined this politically-charged theme have published work which is flawed and have made assertions which cannot be sustained - while because they sought to confirm a preconceived line, ignored developments which did not mesh with their ideological positions, or been blinded to certain evidence by their theoretical preconceptions. And Professor Turner is right to point out that "it does not suffice to retreat to a 'higher plane' where hypotheses take on such an abstract quality as to rule out either confirmation or refutation". However, it also needs to be said that the examination of the relations between economics and politics at a theoretical level remains an important and legitimate subject of inquiry. What is needed is a cross-fertilization between empirical and theoretical work, a dialogue between people who approach their subject in different ways. Blanket accusations of a "striking suspension of professional standards", of "bias" by historians who "generally have little or no personal contact with the world of business" and who stand "left or at least left of centre in their political sympathies", are not designed to promote that dialogue. As Professor Turner knows, many historians whose political sympathies lie on the left have produced excellent, well-researched work: indeed, he has cited quite a few in his book.

In his closing remarks, Professor Turner predicts that some of those reading his book "will contend that the larger picture is hopelessly lost in a mass of detail, the forest being obscured by the trees". Let us hope he is wrong. Those who want to examine broad historical themes should take careful account of the "trees". At the same time, attempts to explain historical developments in general, theoretical terms should not be regarded as hand-waving. Let us hope that Professor Turner's concluding remarks fail to dissuade those who do not share his views from taking seriously the important evidence presented in his book.

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# BOOKS

## Guarding the guards

The Lawful Rights of Mankind: an introduction to the international legal code of human rights  
by Paul Sieghart  
Oxford University Press £9.95  
ISBN 0 19 219190 X

In *The Lawful Rights of Mankind* Paul Sieghart has produced what must be classed as a rarity, if not an outright contradiction in terms - a legal text which is an unmitigatedly good read. Two years ago Sieghart produced *The International Law of Human Rights*, a 600-page tome which has become and is likely to remain for some time one of the basic collections of scholarly interpretation and legal precedents for practitioners of the international law of human rights. Now he has turned his hand successfully to a more popular treatment of the same subject, ostensibly motivated by the belief that international human rights standards will become more influential the more widely their existence becomes known and their content understood.

Sieghart subtitles his work *An introduction to the international legal code of human rights*, but any suggestion here that international human rights standards have been consistently and comprehensively codified would be misleading. The "code" to which he refers is rather an agglomeration of international instruments - two declarations, two covenants, two conventions, three charters and some 20 specialized treaties of various kinds - emerging from a variety of international arenas, predominantly the United Nations, regional organizations such as the Council of Europe, the Organization of American States, and specialized agencies such as the International Labour Organisation. The trend which emerges in these various instruments is a common one, namely a recognized need for there to be some objective international standards whereby the treatment accorded by rulers to those they rule can be assessed. Less conspicuous among the various instruments exists, however, with respect to the specific content of such standards, how they are applied and the possible remedies available in cases where states fail to meet them. Sieghart seeks to be at once comprehensive and concise with respect to his subject matter. This is an approach epitomized by his opening 40-page sweep through the entirety of human history, attempting to pick out the main trends in the evolving relationship between the individual and governmental authority. In perhaps one of the missteps of the book, this tour d'horizon begins with the somewhat fanciful allegory of how "Adam of Adamville" accommodated himself to his mates in paleolithic times. It moves on quickly, however, to describe the accommodation between citizen and state achieved in theocratic and monarchical systems and under various governmental manifestations of liberalism, positivism, socialism, capitalism, etc. To those who may be sceptical about the relevance of inter-

national human rights standards to that accommodation, Sieghart points out that the development of an international human rights "code" is a very new development indeed, whose total impact it is too early to judge. He notes, for example, that almost all of the standards which he is describing have in fact been developed subsequent to - and doubtless to some extent in reaction against - the excesses which Hitler's Germany perpetrated against its own citizens.

The book projects a measured optimism about the potential impact of international human rights standards on the behaviour of governments. Most basically, even if a government chooses only to pay lip service to such standards - and virtually every government goes at least that far - the risk of being exposed as a violator of them becomes a costlier one. Thus, Sieghart notes, the mere collection and dissemination of information on the human rights records of states by non-governmental organizations and other entities can exert significant pressure on those states.

International human rights law does, however, also have the potential for more direct impact on the behaviour of states and their officials. This is most clearly illustrated in the particularly highly evolved human rights jurisprudence of the European system, whereby countries adhering to the European Convention on Human Rights have had to make substantial changes to their laws and practice following decisions by the European Commission of Human Rights and the European Court of Human Rights.

Furthermore, even in cases where states eschew becoming parties to instruments which would lay them open to such outside influence, their officials may find themselves otherwise subjected to the long arm of international law. In one such instance, the Convention on the Elimination of Torture, adopted by the United Nations General Assem-

bly only late last year and not yet in effect pending ratification by at least 20 states, provides specifically that there shall be no safe haven for torturers. A state party to the convention can and indeed must exercise jurisdiction and prosecute alleged perpetrators of torture who happen to be within its territory, regardless of the accused's state of origin, unless extraditing him or her to another country wishing to exercise jurisdiction.

Sieghart's work is an ideal primer for the non-expert. He describes in accessible language all of the basics of the international law-making process. He then outlines the evolution and content of most of the basic international human rights standards and the existing mechanisms for their implementation. In doing so, he also identifies and comments upon the most contentious issues in the field today, such as the ideological dispute between East and West as to whether pre-eminence belongs to economic, social and cultural rights ("human rights begin after breakfast") or civil and political rights ("human rights begin at the police station"). (He takes the sensible view that such a debate is a sterile one given the inextricable interrelationship of the two sets of rights.) While Sieghart's intended audience is the non-expert, legal practitioners working in the field cannot fail to admire the skill with which he has taken their rather unwieldy and nebulous areas of expertise and made it comprehensible. At the same time, imposing an interesting personal interpretative stamp upon it. This is in short a very worthy companion indeed to his earlier scholarly treatise and may, as he himself suggests, serve - even for the practitioner - as a useful entrée to that more demanding tome.

Wesley Gryk

Wesley Gryk is an international lawyer based in London specializing in human rights law.

## Insider dealing

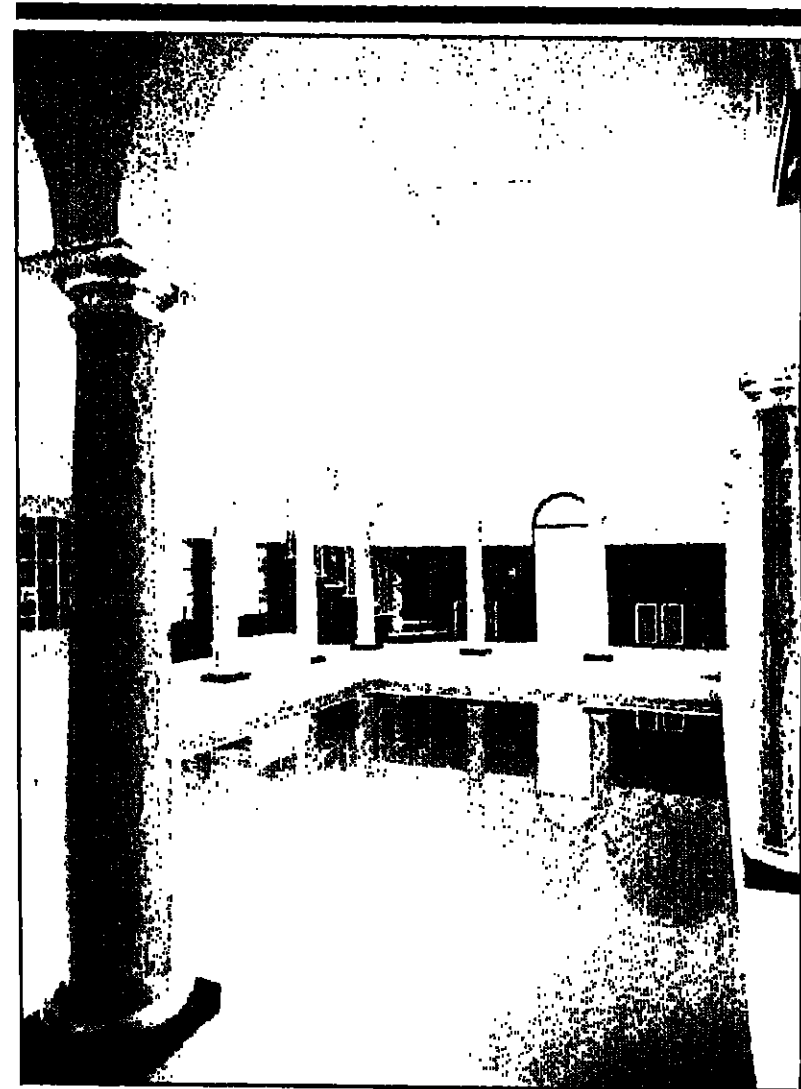
The Aims and Outcomes of Social Policy Research  
by Patricia Thomas  
Croom Helm, £13.95  
ISBN 0 7099 2492 5

The scepticism of the Thatcher government about the value of social science, which resulted in the Rothschild review of the Social Science Research Council in 1982, has posed sharply a number of critical questions about the use and influence of the social sciences.

The opening chapter of this perceptive short study by the deputy director of the Nuffield Foundation is entitled "Is there anybody listening?" and begins by observing that the social sciences have had a bad press. Mocked by newspapers for telling the public what they already knew or else what they know to be untrue, social scientists are also the butt of much mockery because of the way some of them express themselves. Patricia Thomas thoughtfully traces some of the successes and failures of particular research projects which she examines in detail. The core of the book consists of four chapters which briefly describe the

Whitehall research management structure, present 12 case studies of policy-oriented research projects, and examine views of utilization held by line administrators, research managers and researchers themselves. The case studies include the Educational Priority Area projects, socio-legal research which led to changes in legal aid in divorce cases, labour market studies carried out by Political and Economic Planning, a comparison of open and closed prisons, and a study of the rise and decline of small firms. The main data derive from documents on the files of ESRC and private foundations and from interviews with a small number of participants, including "customers" of social science at policy desks in Whitehall.

This modest essay could usefully be read by any social scientist whose research has or could have a policy dimension. It brings out well the extra qualities required to be effective. One is the need for senior researchers to be able to project themselves effectively to ministers and senior civil servants. There is a vivid cameo of Mrs Thatcher as Education Secretary being pleased when A. H. Halsey congratulated her on her new white and gold decorations, with chintz furnishings, in the ministerial office. Another quality is the importance of research findings being clearly communicated in lay language to policy-makers. A third is the need to push one's research results to people's attention. It is not enough to publish and expect the world to take notice. The active academic policy researcher needs to see to it that key people in Westminster, Whitehall, the media and pressure groups are made aware of their findings. Patricia Thomas highlights several familiar themes of effective utilization - timeliness, the play of chance in whether results are taken up, fashion, and the tendency to use research data, as political ammunition. As a defence against the latter, she rightly insists upon the importance of quality in research, a criterion which granting bodies seek, not always quite successfully, to apply. A sharp distinction is not drawn between basic and applied research, and the need for methodological work to sharpen the tools available to social scientists is insisted upon. The analysis of projects with disappointing outcomes is enlightening, particularly the account of Jonathan Roswell's research on efficiency in small firms. He showed that there was no significant relationship between the size of firms and their performance, but performance was better when ownership and management were combined than when they were separate. Firms run by their founders performed better than firms run by their inheritors; and the younger generation did the better the performance. Yet these striking results, with clear implications for government industry policy seeking to promote entrepreneurship, were ignored when



The swimming pool at Woodfalls, a pavilion built in the grounds of Melchet Court, Hampshire. The photograph appears in Clive Aslet's book *The Last Country Houses*, which Yale University Press publish in paperback next week at £8.95.

the Heath government set up a Small Firms Division in the Department of Trade and Industry in 1971. Given the ad hoc nature of the Whitehall system for managing and disseminating social science research, the result is unsurprising. The *Aims and Outcomes of Social Policy Research* concludes by discussing three models of research utilization: the limestone model (of gradual permeation), the gash (zipping in and out) and the insider (on the inside track). This is thought-provoking, but one would have wished for a fuller development of these ideas. The work as a whole is an essay rather than a monograph. Others, Stuart Blume and Maurice Kogan for example, have provided more adequate accounts of social science research management in Whitehall. The evidence for effectiveness or lack of it is drawn mainly from participants' accounts. Identifying what would have wished for confirmation from other sources. But these are caveats. The book provides a sensible, fresh, empirical illumination from the inside of how and why the social sciences have the impact that they do.

Martin Bulmer

Martin Bulmer is senior lecturer in social administration at the London School of Economics and Political Science.

## Gold digging

Anglo American and the Rise of Modern South Africa  
by Duncan Innes  
Holt Rinehart & Winston, £8.50  
ISBN 0 435 96351 1

"They amounted to no less than the greatest social revolution ever carried out on the African continent". Thus writes Duncan Innes of the social relationships that developed around gold-mining capitalism in South Africa. It is a judgement that would be challenged by the black nationalist leaders who have led their countries to independence; the imperialists who had earlier imposed colonial rule; and the Muslim and Christian evangelists who have spread their religions across Africa. But there is no denying that the gold mining industry has had a great social impact

in southern Africa.

In his study of Anglo American (AA), the company which dominates sectors of the South African economy, Innes sets out to outline the company's development, and then, more ambitiously, to analyse that in the general context of South Africa's society. Although there is still the stamp of the PhD thesis in the mass of information Innes provides, he traces clearly and well the rise of the company; first in the East Rand mines in the 1910s (which required massive investment development after 1945) to the Free State mines ("The Orange most spectacular financial undertaking ever conducted in South Africa"). From its base in gold mining AA has always sought opportunities to extend its economic interests, first into diamonds and later manufacturing and only across South Africa but into the international arena. In two large sections Innes lists the remarkable size and scope of the Anglo group and

As a non-Marxist I have a problem in evaluating Innes's second task - the analysis of South Africa's society. In my view the great contribution of African studies has been to underline the importance of economic development in shaping social relations and the importance of economic interest in the pursuit of social and political objectives. Where the Marxists fall short, however, is in failing to recognize that this is only part of the story and that other factors can be equally important, and that a Marxist framework (even if modified from its 19th-century origins) is inadequate in explaining South African social development.

Three examples should serve to illustrate my criticisms. First Innes has explained that monopoly capitalism characterizes the rise of AA - "in the era of monopoly capitalism there is little room for the entrepreneur". Yet elsewhere he describes the importance of entrepreneurship. For example in the 1920s when Ernest Oppenheimer skillfully

diamonds - and at the end of the study Innes returns to the importance of the Oppenheimer family in AA's growth. Is it not the case that the entrepreneurial abilities of the Oppenheimers and their associates have played a major part in AA's rise, but that those abilities required the right social and financial circumstances in which to flourish? A second example of the dilemma that faces Innes is the problem of explaining the importance of racial divisions when Marxist analysis is built on class divisions. He falls back on the old distinction between "free workers" (whites) and "unfree" (blacks), but this is simply a device to try to surmount the obvious fact that in South Africa differences of race are interlocked with, and often more important than, those of class.

Finally Innes fails to face up to the problems of the relationship between the capitalist companies and the government. He simply assumes that the government and the companies act together. Sometimes they do, but not always. For instance Innes sees the conflict of the early 1960s between the government and the black nationalists

as a struggle between capital and labour. He writes of the government "smashing" the working class to open the way for the capitalist boom of the 1960s. A side product of the government's action may have been to help the boom, but that was certainly not its chief aim. Its aim under Verwoerd's leadership was to defeat black nationalism and then to impose rigorous apartheid policy by the use of large numbers of blacks into the Bantustans where white investment would be forbidden. The companies supported the government in so far as it fought against a black nationalist revolution, but they strongly opposed the Bantustan policy, because they believed it adversely affected the supply of labour and the opportunities for capitalist enterprise. Not for the first time in South Africa's history companies and government were in opposition.

James Barber

Dr Barber is master of Hatfield College, University of Durham.

## Way upstream

Keeping Track: how schools structure inequality  
by Jeanne Oakes  
Yale University Press, £21.50  
ISBN 0 300 03292 7

Tracking is the American high school equivalent of setting or options in British secondary schools. Grouping children by their imputed ability or measured achievement is commonplace on both sides of the Atlantic. Jeanne Oakes's research of nearly 14,000 teenagers' experience of tracking in 25 high schools has already been reported in a number of journal articles. In this book it is used to present tracking as a social and political issue. Oakes provides a readable summary of the history of the practice, which

shows interesting similarities to that of streaming and secondary selection in this country; the institutionalization of psychological concepts of learning. In the 19th century (and still extensively in the third world) children's levels of educational success were attributed to how hard they worked; hence the use of corporal punishment for "laziness".

"Intelligence" provided a different explanation; children varied in their capacity to learn, originally thought to be inherited and largely immutable. Intelligence tests enabled ability peers to be grouped together at the same pace. In this country the metaphor was of streams, fast and slow. Oakes doesn't make the point, but tracks take the form of a social hierarchy, as in this country, ability grouping was justified as being in the best interests of individual children (meeting their "needs", in the recent terminology), and of the country in terms of supply of talent. The drift to "heterogeneous classes" (mixed ability, here) was reversed in the Sputnik era, when the Soviet Union's presumed technological

lead was blamed on the high schools' failure to foster the most able. British readers could find many parallels in our current situation.

Oakes's concern is with the "equity" of present-day tracking. Its main purpose is to provide different learning experiences to children of different learning capacities. These are unequal, in that high track students are taught and learn more of the same subjects, but also are more likely to follow traditional academic studies, as part of college preparatory courses. Low track students more often follow quasi-vocational courses, (including the fascinatingly unexplained "military studies"). Although she has data about the social and ethnic composition of the schools, the individual students were not identified by class or ethnicity, so the evidence of other tracking studies is used which have shown working-class and ethnic minority children to be statistically over-represented in the low tracks. Her suggestion is that the match that exists between social origins and social des-

tinations, working-class (and ethnic minority) children taking working-class jobs, is mediated through the tracking system. This is used to put a gloss on Bowles and Gintis's correspondence theory of social and economic reproduction through schooling. Willis is also referred to in this context, but Oakes has not taken his observation that the low stream boys in his study had ambitions to follow their fathers into semi and unskilled manual jobs early in their secondary school careers, rejecting the prospect of "getting on" through academic studies.

The particular issue of equity that Oakes discusses is access to learning experiences. This is mainly presented in terms of social class and ethnic differential access to academic studies rather than vocational ones. In litigation-active America, a number of court cases have been brought concerning minority access to such courses. The general point is an important one. If some children are defined as being incapable of learning, say French, they are tracked to learn

no French, so that the definition is made real. Such decisions and their consequences are part of most educational selection processes. Oakes's advocacy of more heterogeneous (mixed ability) learning groups, is coupled with the familiar regret about the importance of education in occupational placement.

This is a modestly presented book, based upon limited original research. Nothing was studied of the track placement processes, and although there is some speculation about track "stigmatization", there are no references to the British studies of streaming and cultures. Apart from such obviously missed references, some of those reported are incomplete and the index is irritatingly meagre. In general, it is a disappointing book.

Ronald King

Dr King is reader in education at the University of Exeter.



# BOOKS

## Aesthetic standards

Redesigning the World: William Morris, the 1880s, and the arts and crafts  
by Peter Stansky  
Princeton University Press, £29.60  
ISBN 0 691 066167

The one hundred and fiftieth anniversary of William Morris's birth (1834) has coincided with a widespread reappraisal of his contribution to political, social and artistic thought in both his day and our own. Other Victorian "art-warriors" (as Reynier Banham once described them), most notably John Ruskin, have undergone similar attention which has usually raised them from harmless, almost generally respected men of anachronistic utopian visions, to powerful prophets of the post-industrial two-tier economy. Morris, of course, had never wholly been out of fashion: his social ideas remained in vogue with a significant part of the left until the 1960s, while his artistic influence - on both theoretical and stylistic levels - has been acknowledged since the mid-1930s when Nikolaus Pevsner extolled Morris as the first of the *Pioneers of the Modern Movement*. The 1960s - with its progressive optimism and preference for the imagery of technological progress - was a fallow time for Morris's reputation but, since the mid-1970s and increasingly in the 1980s, the controversial issues of leisure (whether voluntary or not) and job satisfaction, of individual identity in an automated world and the subsequent necessity for aesthetic pleasure, have brought Morris back to centre stage.

Morris's anniversary and realignment in the cultural mainstream has spawned a large number of books, catalogues and articles, the latest of which is the rather unimpressively-titled *Redesigning the World*. In it Peter Stansky, professor of history at Stanford University, deals with the influence of Morris on the Arts and Crafts Movement of the 1880s. Chapters are devoted to Morris's career and ideas; the Century Guild; the Arts and Crafts Exhibition Society. An enormous amount of research has gone into the book and we are given detailed and factual accounts of the formation and development of the three arts and crafts groups. Morris, quite justifiably, reappears at length in each of the chapters for he was both actively involved with the groups as patron, supporter or honorary member, or continually present in spirit as a mentor and guiding force.

Morris's relationship to the arts and crafts movement is, however, not as straightforward as we may have ex-

pected because, Stansky argues, Morris's feelings about the groups are somewhat ambivalent. Morris came to believe (some would say realize) that art and design are the outward manifestations of society's spiritual condition and social structure. This conviction led him to the conclusion that art could only be meaningfully improved if that improvement was the result of changed conditions in society and, specifically, the changed role and status of the worker or artisan. Capitalism and machine production, Morris preached, denied the craftsman the pleasure of labour and this fact alone necessitated the overthrow of the system. That contemporary mid-Victorian design was aesthetically abominable confirmed his hatred of the system and had driven him, in 1861, to the positive action of starting his own firm.

In addressing himself to design reform Morris was, as he himself increasingly realized, putting the cart before the horse and dealing with symptoms rather than causes. Good design may be aesthetically satisfying but is it of any real value in socialist society if it is not the outcome of a social revolution? Morris answered that question by giving greater and greater import to his political and

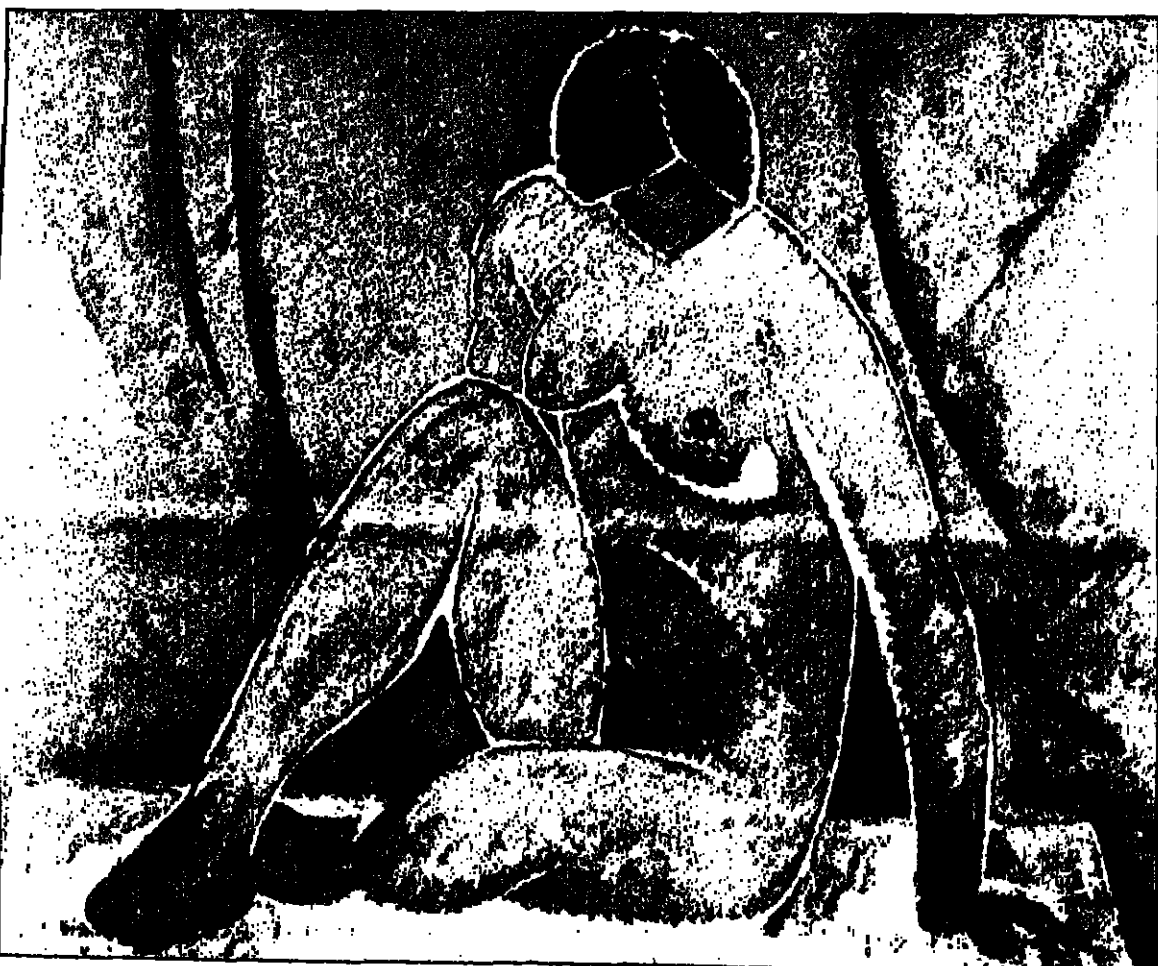
social theories from the 1870s until his death in 1896. But the arts and crafts groups were predominantly concerned with aesthetic standards and taste. True, some individuals in the groups may have shared Morris's political convictions, and the groups as a whole may - without real commitment or understanding of the implications - have been sympathetic to socialist ideals, none the less art and design were what really mattered to them and they retreated from the social struggle, wealthy middle-class drop-outs cooing themselves in their self-indulgent little guilds. Morris was not opposed to their formation but, as Stansky points out, he was deeply pessimistic about their effectiveness and usefulness.

The relationship between Morris and the arts and crafts groups, and the detailed histories of those groups are the strengths of *Redesigning the World*. The main weakness concerns the designs and artefacts of Morris and the groups. The appearance, association and meanings of the objects - the consistent emphasis on "simplicity", "honesty", truth to materials and the mark of the hand - are crucial to a full understanding of the arts and crafts value system. Stansky rarely mentions

the works themselves and relies on the views of others when he does. Nor do illustrations (so vitally important in such a book) make up for the paucity of discussion. There are only 16 illustrations (all black and white) in this £30 book, and these have the contrasted starkness of photocopied illustrations. Stansky's unqualified lack of confidence with visual matters may be that his subject is history, not art and design. To underline this, when it comes to assessing Morris's position and influence in the history of design, Stansky's tentative judgements read as if they are the result of limited knowledge rather than the academic quest for balance. The book has its undoubted value as a history of the arts and crafts groups and as "further reading", but it is not an introductory or standard text and its weaknesses prevent it from being "essential reading", especially at a time when so much critical rethinking of Morris is in progress.

Nigel Whiteley

Dr Whiteley is head of the department of visual arts at the University of Lancaster.



A reclining nude (1913) by the Russian constructivist painter Vladimir Tatlin, taken from the new paperback edition of John Milner's book *Vladimir Tatlin and the Russian Avant-Garde* (Yale University Press, £8.95).

# Images and 'isms'

Poetry, Painting and Ideas, 1885-1914  
by Alan Robinson  
Macmillan, £25.00  
ISBN 0 333 36692 1

Histories of the early Modernist period tend to rush towards the future. Often the poets and painters are thought of as experimentalists looking onwards and upwards, confident of the eventual outcome: which in the visual arts means abstraction; and in literature means the final achievement of *The Waste Land*, *Ulysses* and *The Cantor*. Our present disenchanted picture of a Modernism whose future turned out to be a more or less ghastly flop is one reaction, strongly disabused, to that forward-looking story. But the story itself, Alan Robinson argues, may be quite wrong. Think of the early Modernists: into the past, and as far more conservative than we tend to assume. If we remember that the background of the pioneers is fin-de-siècle, and is mystical rather than formalist, we will be closer to the truth.

Robinson's visionary history is full surprises. In the case of the visual

arts it was always clear that the general rejection of Impressionism (as an art of exterior surfaces) led the painters of the 1890s to emphasize inwardness, empathy and symbols. What is surprising is that this painterly development seems to have crossed over to writers, and to have coloured not only the early Yeats, but Pound also - until quite late. In the kind of "inward" Impressionism advocated by Walter Sickert, where a clear grasp of the visual facts is tempered by the feelings "accompanying" the facts, the aims and practices of painting are so close to those of Imagism that the usual divisions and demarcations (between literature and painting, or between Sickert and the Imagist poets) seem irrelevant: it's the continuities, Robinson says, that count.

No less unexpected is Robinson's merger of two phases we usually think of as distinct, Imagism and Vorticism ("The first point to make is that there is no difference..."). Why do we go looking for it? It may after all be because Lewis's propaganda effort to promote Vorticism, combined with the critical habit of believing that all these -isms are real, have persuaded us to see more innovations and more -isms than in fact there were. Yet for Pound, at any rate, the word "Vorticism" seems to have been little more than a device for publicizing the fact that both writers and painters worked side by side at his Rebel Arts Centre. Since it

obviously didn't make much sense to call the painters Imagists a new label was needed. But it didn't count for much, and there was no particular change of style in Pound's own writing between Imagist and Vorticist periods, and no apparent influence on Pound from the Vorticist visual arts (Robinson argues).

Perhaps the most surprising among the revisionist discoveries is the close connection between Modernism and a long-lived and remarkably strong current of mysticism. The mystical tone is obvious in the case of Kandinsky, but Robinson finds it equally evident in Futurism and in the English reaction to the Futurists, in Pound's cult of troubadour verse, in the early Hulme, and in H.D. One may need more persuading to accept Robinson's suggestion that the electric aura of theosophy are cousins to the shimmering lines of force in Futurist painting. But Robinson's brilliant analysis of H.D. in particular establishes a close link between the intensely empathetic strain within Imagist poetry, the way it wants to dissolve our being into the dazzling world of things, and the esoteric mysticism of, for example, Franz Mesmer (a related variety, Robinson argues, traces to Pound from the Rosicrucian Yeats).

There are some problems Robinson seems not to address. He finds it less difficult than he should to plot poetry against the visual arts and at times the correlations are just asserted: "Several

[Symons's] poems are close to the perceptual characteristics and technical procedures of French Impressionist canvases" (my emphases). Without a thought-through method for measuring one art against the other we have to take such equivalences on trust. Robinson shows how important the principle of "rhythm" is to Pound. But if rhythm is that important, how would he convince us that this is not the reflection in language of the remarkable rhythms of Vorticist painting and sculpture? Correlations and "influences" here are so messy and shifting it would be better not to argue for them; yet Robinson's account sometimes relies on such precarious cross-comparisons.

Although the widened framework is occasionally unstable, the book's grasp of literature and the visual arts, taken together, is exceptionally good. When David Watkin exposed the cult of teleologies in Pevsner, the way opened up to a quite different, and subtler, history of the Modern movement. Alan Robinson may have achieved something similar for literary history. And may have cleared away at least some of the period's misleading clutter of -isms.

Norman Bryson

Dr Bryson is a fellow of King's College, Cambridge.

# Nests of singing proles

Fakesong: the manufacture of British 'folk-song' 1700 to the present day  
by Dave Harker  
Open University Press, £8.95  
ISBN 0 335 15066 7

The title suggests something along the lines of Eric Hobsbawm and Terence Ranger's *The Invention of Tradition*. J. M. Ellis's expose of the Grimé Brothers' fabrications in *One Tail Too Many*. It is, however, a misnomer. Dave Harker is not concerned with the ethics and aesthetics of "editing" folk-songs (or ballads, as they were generally known until the late 19th century). His perspectives are avowedly Marxist and his keyword is "mediation": what interests him is who collected the songs and why their motives can be analysed in enlightened Marxist terms. And as Harker sees it, the underlying politics of folk-song are a straightforward matter of bourgeois dilettantes patronizing and expropriating authentic manifestations of proletarian culture.

Picking up on the interpretation of pastoral put forward in Raymond Williams's *The Country and the City*, Harker traces three hundred years of folk-song collectors through a family organized series of thumbnail biographical sketches of considerable trenchancy and wit. He shows how the antiquarianism of 18th-century collectors like Ritson and Percy (of the *Reliques*) aimed squarely at the polite metropolitan taste for the rural and primitive, and how the spirit of romantic "Toryism" distorts a volume like Scott's *Minstrelsy of the Scottish Border*. He charts the rise of a more theoretically based approach in the work of the 19th-century American Francis James Child and the beginnings of an ideology of transmission and "communal inspiration", and he concludes with an examination of the still dominant work of Cecil Sharp, who mourned the way that folk-song had been flattened by industrialism and mass literacy, and of A. L. Lloyd who extended the scope of study into the mining towns, but whose efforts are muted, in Harker's eyes, by an excess of Statismism.

It all makes for a fascinating and infuriating study. Harker has a sharp eye for irony. His running complaint is the collectors' varying but "breath-takingly confident caricature of 'common folk'..." and it is an unanswerable case, conveniently encapsulated in the fact that the Folk Song Society established its headquarters in deep-sea Mayfair. But Harker is hoist with his own petard. He refers throughout to something he calls "workers' culture" which soon comes to seem every bit as much a sentimental fiction as Cecil Sharp's comparison of country villages to "nests of singing birds". Even more disabling is his itch to mark all the collectors out of ten, on the scale of their socialist sympathies, as though they were all recalcitrant schoolboys. This leads him to be particularly unfair on Sharp, whose pioneering work on the musical structures of English folk-song is virtually ignored to make space for diatribes against his nationalism and petty prudery.

Finally, Harker's own perspective, though impeccably consistent, shrinks to an obsession with class origins, to the point of his printing his own biographical credentials in an appendix. The book's title promises a treatment of the "manufacture" of folk-song but there is almost nothing about the specific formal techniques used to mediate the oral materials, nor any real sense of the "faking" of folk as a phenomenon which stretches throughout European high culture, from Ossian and Grimm to the folk-song settings of Mussorgsky, Vaughan Williams and Bartók. The dimensions of the case are simply not tackled, and what could have been an important piece of cultural history ends up reading like a long footnote to it.

Rupert Christiansen

Rupert Christiansen is currently working on a study of Romantic biography.

Robert Burns's 1786 collection *The Kilmarnock Poems*, most of which are in Scots dialect, has been published by Dent's Everyman Library in an edition by Donald A. Low (£10.95 and

# BOOKS

## Ticking over

Metabolites and Metabolism: a commentary on secondary metabolism  
by Edwin Haslam  
Clarendon Press: Oxford University Press, £15.00  
ISBN 0 19 853773 7

During a period of intense meditation, it is said that the Buddha cut off his eyelids to prevent sleep overtaking him. They fell to Earth and from this sacred spot the first opium poppy grew to give Man sleep and tortured dreams. Two thousand, five hundred years later our notions of why this species of poppy produces morphine are only a little less fanciful. Similarly, that scourge of the Middle Ages - ergotism - caused mental derangement, gangrene, and death. Also known as St Anthony's fire by virtue of the blackening of limbs associated with gangrene, it was believed to be a direct result of sinful behaviour. We know now that bread contaminated by the fungus *Claviceps purpurea* was responsible and that the ergot alkaloids it produces do cause mental disturbance and marked constriction of blood vessels; but we are still wholly ignorant of why the alkaloids are made.

Such naturally-occurring chemical compounds that are apparently essential to the plant, animal or microorganism producing them, are known as "secondary metabolites". The products of primary metabolism - proteins, carbohydrates, nucleic acids, lipids and so on - are essential for all life-forms. The chemistry of secondary metabolites has been seriously studied since about 1800, and during the past 30 years their biogenesis has been closely examined. Much more recently, attention has been focused on the individual enzymes that control their biosynthesis; and it is through a greater understanding of this area that Professor Haslam believes we may begin to assign a role to secondary metabolism.

The first five chapters of his book provide a summary of the main pathways of secondary metabolism and of the methods by which those pathways have been delineated. Although most of this information can be found in several other books, the novelty of this one lies in its last two chapters, in which the mysteries of secondary metabolism are probed and explanations proffered or rejected. One major problem concerns whether

secondary metabolism evolved for a purpose or whether it was "discovered" accidentally and then maintained because production of secondary metabolites conferred an advantage on the producer organism. Certainly many of the compounds do serve a useful function, as noxious deterrent substances (for example, nicotine in the tobacco plant or the quininees sprayed on to predators by the Bombardier beetle); or as sexual attractants (for example, the insect and mammalian pheromones); and as germination controlling agents (for example, phenols leached from leaves or alkaloids released by barley roots). But there are thousands of secondary metabolites for which a role is unknown, and the sheer prodigality of secondary metabolism requires an explanation.

Professor Haslam discusses the view that production of particular compounds may be a consequence of stress on the organism, including the changing levels of nutrients available at different stages of development, as well as obvious environmental factors. Some secondary metabolites, the so-called phytoalexins, only appear in plants following invasion by microorganisms; and many mould metabolites, including most antibiotics and the ergot alkaloids, are only produced during particular stages of the growth cycle, but the responses to other forms of stress are less well documented.

One interesting suggestion, considered by Haslam at some length, is that secondary metabolic pathways

may be activated when the level of nutrients does not allow optimal use of the primary pathways. It is as if the enzymes of these major routes are intermediates into less demanding and perhaps useless minor pathways. If some of the products of these initially worthless pathways may prove advantageous to the organism as it seeks to eat, mate and avoid the attentions of predators, these routes will remain activated. For example, the opium alkaloids were perhaps originally useless products of tyrosine metabolism, but because they functioned as feeding deterrents for grazing herbivores, the new pathway was maintained and now produces substantial amounts of these compounds.

This thought-provoking book raises as many questions as it answers. The coevolution of plants and insects, for example, depends to a large extent on the interactions mediated by secondary metabolites; but little is known about the subtleties of those interactions or about the timescale of their evolution. However, as the book contains a lot of chemistry, it may not be widely read by non-chemists. This is a pity, and a popular text for the interested layperson could provide a useful extension for the book.

John Mann

John Mann is lecturer in chemistry at the University of Reading.



Copy of a 17th-century painting of a dodo, from Robert T. Gunther and the Old Ashmolean, edited by A. V. Slincock (Museum of the History of Science, £4.00).

# Tail of the lion

General Relativity  
by Robert M. Wald  
University of Chicago Press, £28.50  
ISBN 0 226 87033 2  
A First Course in General Relativity  
by Bernard F. Schutz  
Cambridge University Press, £30.00 and £9.95  
ISBN 0 521 25770 0 and 27703 5

"Revolution in science", "New theory of the universe", "Newtonian ideas overturned" - we read among the headlines of *The Times* on November 7, 1919. General relativity, Einstein's theory of the gravitational field and the structure of space and time, had been put to the test and had passed with first-class honours. By common consent, the theory is and probably will remain the supreme intellectual achievement of 20th-century science. Einstein put general relativity into its definitive form (after several years of preliminary attempts) in November, 1915, and it appeared in full the following year in an elegantly written exposé entitled *Die Grundgesetze der allgemeinen Relativitätstheorie*. What is remarkable about general relativity, apart simply from the fact that it works, is the way in which a great chunk of pure mathematics (Riemannian geometry - the analytical tool used to study higher-dimensional curved spaces) sits comfortably and conspi-

cuously at the heart of the theory. Einstein was himself aware of this point when he wrote to Arnold Sommerfeld in 1916: "I have become imbued with great respect for mathematics, the subtle parts of which I had in my simple-mindedness regarded as pure luxury until now"; and again in 1933 when in his Herbert Spencer lecture at Oxford he remarked: "It is my conviction that pure mathematical construction enables us to discover the concepts, and the laws connecting them, which give us the key to the understanding of the phenomena of Nature."

Not surprisingly, the theory was immediately of great interest to pure mathematicians, and among its first proponents we find David Hilbert, Hermann Weyl, Emmy Noether, Felix Klein and Élie Cartan, all of whom made contributions to the development of the theory. Indeed Hilbert was able in 1915, independently of Einstein, to derive the correct equations for the gravitational field in the presence of material sources - these calculations being based on the physical-geometrical ideas already made explicit in Einstein's somewhat earlier treatment of the vacuum equations. Cartan goes the distinction of having invented, in a series of articles published during 1923-25, the only mathematically sound and physically compelling significant generalization of Einstein's theory yet proposed.

Despite this instantaneous recognition of the rich and subtle mathematical character of the theory by the best mathematical brains of the day, the point was not always taken on board by traditional physicists - and even as late

# Variations without calculus

Mathematics and Optimal Form  
by Stefan Hildebrandt and Anthony Tromba  
Scientific American Library: Freeman, £20.95  
ISBN 0 7167 5009 0

Can mathematics explain the shapes of things? Why do bubbles form spheres and crystals form angular prisms? Why do honeycombs and some rock formations show patterns of hexagons? Why are eggs egg-shaped and fish fish-shaped?

Sometimes the answer seems to be that the observed shape is, by some criterion, the best possible. Bees could fill honeycombs with triangular or square cells, or with a mixture of polygonal shapes, but by building hexagons they minimize the area of wall needed to enclose a cell of honey of given volume and depth: hexagons save wax. Tunnies and other fast-swimming fish have streamlined shapes that seem to minimize the resistance that the water offers to their movement.

In other cases, the shape seems to arise as the natural result of a stable equilibrium. Soap bubbles of any initial shape tend to become spherical just as surely as balls roll downhill, because surface tension tries to minimize the area of the soap film. Notice that the shapes of honeycomb cells, tunnies and soap films combine things: wax requirements, water resistance or surface area. In other cases the best shape maximizes something.

In some cases best shapes have been discovered (so far) solely by experiment. Thus, the best streamlined shape for various purposes, have been sought by wind-tunnel tests. In other cases, the best shape can be found by mathematical analysis. The appropriate technique is often calculus. For example, it is easy to show by calculus that to make a cylindrical can of given volume from the smallest possible area of tinplate, you should make the height equal to the diameter. (I don't know why so few food cans have these proportions.) In this problem the answer is a single parameter (the ratio of height to diameter) and can be found by simple differential calculus. In other problems the answer is the equation of a curve or a surface, and the calculus of variations is required.

Stefan Hildebrandt and Anthony Tromba, both professors of mathematics, have written a book about the calculus of variations and the light it

sheds on natural form. Aiming their book at the general reader, they assume no knowledge of mathematics beyond elementary geometry and algebra. Astonishingly, they have entirely avoided the notation of the calculus. There is no differentiation or integration, or even an explanation of what a derivative or an integral is. Maxima and minima, stable and unstable equilibria, are explained by diagrams of balls rolling on hilly landscapes.

Hildebrandt and Tromba do not explain the techniques of the calculus of variations, or even the underlying principles, but they show the kinds of problem that can be solved. The classical examples are presented: the isoperimetric problem, which asks what shape a boundary should be made to enclose the maximum area in a fence of given length (answer: a circle); the brachistochrone problem, which asks what curve a wire joining two points should follow, to enable a bead to slide down fastest (answer: a cycloid); and Plateau's problem, which finds physical realization in the shapes of soap films.

Although calculus of variations is not actually used in the book, geometric solutions of some problems are presented. For example, the shortest possible system of roads connecting three towns involves a junction, the roads meet there at angles of 120 degrees. This is proved by a simple argument using a circle and an ellipse.

The first half of the book is largely historical. We are introduced to G. W. Leibniz, Jakob and Johann Bernoulli, Leonhard Euler and other participants in the history of the calculus. We are then taken back to Thales and Pythagoras, and on to C. F. Gauss and J.A.F. Plateau. Simple accounts of these people's work are enlivened by anecdotes and by portraits and other apt illustrations.

The second half of the book is largely about soap films, about how their shapes depend on the tendency of surface tension to minimize areas. We are shown why soap films in clusters of bubbles meet each other at 120 degrees but meet solid surfaces at 90 degrees, and why films on non-planar loops of wire become doubly-curved (saddle-shaped).

This is an enjoyable book, made particularly attractive by its lavish illustrations. No opportunity for an apt picture is lost. For example, when it is shown that a soap film can form a Möbius strip on a double loop of wire, we are presented not only with a diagram of the wire and the soap film, but also with a diagram showing how to make a Möbius strip from paper, Escher's drawing of ants crawling on a Möbius strip and an engraving of Möbius himself.

R. McNeill Alexander

R. McNeill Alexander is professor of zoology at the University of Leeds.

Schutz's book, intended for undergraduates reading in honours physics courses, leans rather more towards astronomical and experimental considerations. Hints of the influence of Schutz's mentor Thorne, and more generally the ethos of the "Caltech school", are evident throughout. One striking feature is the book's unusual approach towards the development of the ideas leading from special to general relativity, which is achieved via careful and detailed exposition of special relativistic fluid dynamics. This paves the way for an account of stellar interiors and cosmological models, both of which rely on some knowledge of fluids in a general relativistic setting.

Both books in their final sections treat the Hawking process (the quantum mechanical tendency for black holes to "explode") and other matters to do with quantum gravity - in many ways the most obscure, incomplete and therefore intriguing branch of the subject. Although it is difficult to imagine exactly what Einstein would have thought of current developments, he may have been sympathetic: in 1914 - some time before his theory had crystallized, Einstein remarked: "Nature shows us only the tail of the lion - but I do not doubt that the lion belongs to it even though he cannot at once reveal himself because of his enormous size".

L. P. Hughston

L. P. Hughston is fellow and tutor-in-applied mathematics at Lincoln College, Oxford.







### THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

Applications are invited for these positions in the following departments:  
**Department of Architecture and Building**  
**PROFESSOR AND HEAD**

A vacancy will exist from mid-September 1985 for the Professorship in the Department of Architecture and Building. The Department currently offers a four-year postgraduate Diploma in Building Technology which includes one-year supervised professional experience. Graduates with a high academic achievement in this programme can proceed to the two-year Bachelor of Architecture and Building degree which is recognised as a professional qualification in Papua New Guinea. Streaming within the planning. A further two year graduate Diploma in Physical Planning provides professional training for physical planners.

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Applicants should hold a Ph.D. degree and have had considerable professional experience. The appointee will be expected to provide leadership in teaching, research and be involved with industrial/governmental liaison. Working experience in developing countries would be an advantage.

This position will fall vacant on 31 December 1985.

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 The Department offers undergraduate studies to Diploma level in Surveying and Land Studies and to degree level in Cartography, Land Management and Surveying. Postgraduate courses in Land Studies are also offered.

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The appointee will be responsible to the Head of the Department for academic leadership and conducting courses in the general surveying areas.

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 Applicants should possess a basic degree in Agriculture or Animal Science from a recognised university with preferably a Ph.D. in ruminant nutrition.

Applicants with teaching experience in livestock production and animal nutrition in tropical countries will be preferred. Duties include teaching of biochemistry, animal nutrition and animal husbandry in undergraduate and postgraduate programmes of the Department.

Successful applicant is expected to continue with the present ruminant nutrition studies.

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Initial contract period is for approximately three years (Head of Department of Architecture and Building may be for 2 years). Other benefits include a gratuity of 24% taxed at 2%, appointment and leave benefits, leave bonus for the staff member and family after 18 months of service, settlement and setting-out allowances, school fees, home housing, salary protection plan and medical benefit schemes are available.

Detailed applications (two copies) with curriculum vitae, together with the names and addresses of three referees and indicating earliest availability to take up post, should be received by: The Registrar, Papua New Guinea University of Technology, Private Mail Station 11, Port Moresby, by 27 September 1985. Applicants Association of Commonwealth Universities (Appl), 36 Gordon Square, London WC1H 0PF, from whom further general information may be obtained.

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**is 10am Friday**  
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### UNIST

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Applications are invited for a temporary lectureship in Artificial Intelligence in the Cognitive Studies Group of the University of Sussex. The position is for a period of 12 months, starting in October 1985. The appointee will be responsible for teaching and research in the field of Artificial Intelligence. The position is open to holders of a Ph.D. degree in a relevant field. The appointee will be expected to contribute to the development of the Cognitive Studies Programme. The position is open to holders of a Ph.D. degree in a relevant field. The appointee will be expected to contribute to the development of the Cognitive Studies Programme.

There is also a 2 year research fellowship in Artificial Intelligence in the Cognitive Studies Group of the University of Sussex. The position is for a period of 24 months, starting in October 1985. The appointee will be responsible for research in the field of Artificial Intelligence. The position is open to holders of a Ph.D. degree in a relevant field. The appointee will be expected to contribute to the development of the Cognitive Studies Programme.

Salary will be on the scale £7,520 - £12,150 p.a. (under review). According to age, qualifications and experience.

Further particulars and application forms are available from the Registrar, University of Sussex, Brighton BN1 9QJ. Tel: 01273 275611. Closing date: 31 August 1985.

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## Fellowships

### The Employment Research Centre

**RESEARCH FELLOW (half-time)**  
 Applications are invited from economists with a Ph.D. degree and research experience in the field of employment. The position is for a period of 12 months, starting in October 1985. The appointee will be responsible for research in the field of employment. The position is open to holders of a Ph.D. degree in a relevant field. The appointee will be expected to contribute to the development of the Employment Research Centre.

Salary will be on the scale £7,520 - £12,150 p.a. (under review). According to age, qualifications and experience.

Further particulars and application forms are available from the Registrar, University of Sussex, Brighton BN1 9QJ. Tel: 01273 275611. Closing date: 31 August 1985.

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## Polytechnics continued

### LIVERPOOL POLYTECHNIC

Department of Mechanical, Marine and Production Engineering  
**LECTURER II—MECHANICAL OR MANUFACTURING ENGINEERING**  
 £7,548 - £12,099

Required to contribute to teaching and collaborative academic/industrial project work in the Department's under and post graduate courses.

Applicants should have a sound academic background and experience in the application of modern manufacturing or mechanical engineering technology.

Informal enquiries may be made to Professor W.B. Rowe - 051 207 3581 ext. 2017.

For further particulars and an application form contact the Personnel Officer, Liverpool Polytechnic, Rodney House, 70 Mount Pleasant, Liverpool, L3 5UX (Tel. 051-207 3581 ext. 2518/2519) to whom applications must be returned not later than Wednesday 4th September, 1985.

Liverpool Polytechnic is an Equal Opportunity Employer and welcomes applications irrespective of race, sex, marital status or disability.

Further particulars and application forms are available from the Personnel Officer, Liverpool Polytechnic, Rodney House, 70 Mount Pleasant, Liverpool, L3 5UX (Tel. 051-207 3581 ext. 2518/2519) to whom applications must be returned not later than Wednesday 4th September, 1985.

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Further particulars and application forms are available from the Registrar, University of Sussex, Brighton BN1 9QJ. Tel: 0127



## Research and Studentships continued

## RESEARCH ASSISTANT

## City Business History

A full-time post to assist with the completion of Volume II of a major business history. Remuneration based on ESRC rates. Located in the City of London. Starting time: September 1985.

Successful candidate will have a sound first degree in economic history, modern history, or some related discipline. Further research experience in these, or similar fields, is also essential.

The post would suit a graduate student in the final stages of completing a PhD dissertation; and a candidate in this, or similar, situation would be preferred. Applications, including a full curriculum vitae and two academic references, should be sent to:

Clive Treblecock,  
Pembroke College, Cambridge, CB2 1RF.  
(Pembroke College has no direct involvement in this project)

## University of Warwick

Department of Sociology

## ESRC LINKED STUDENTSHIP ON THE IMPACT OF UNEMPLOYMENT ON BRITAIN'S ASIAN COMMUNITY

Applications are invited for the above studentship, available for two years from October 1985. For candidates who wish to read for an M.Phil. or Ph.D.

The successful candidate will work with Mr P. Ratcliffe, who is a member of an Anglo-French research team investigating the social implications of unemployment in Coventry and Rouen. This project focuses on work attitudes, family and community structure, ethnic relations and political culture. The student's research will be concerned with the sociological dimension of this study and work with the team in the Coventry labour market.

For further details and an application form, phone 0800 84011. See 8400 or write to the Secretary for Graduate Studies, Department of Sociology, University of Warwick, Coventry CV4 7AL. The closing date for applications is Wednesday, September 25, 1985. (15104)

## University of Warwick

Department of Engineering

## RESEARCH STUDENTSHIP

Applications are invited for the above 3-year post, leading to the degree of Ph.D., sponsored by the Department of Engineering Science. The project is concerned with cavitation in water turbines. The person appointed will be required to conduct relevant literature on cavitation theory and cavitation damage, and undertake research on the above blade and performance, and related matters.

Candidates should possess or expect to obtain a First or Upper Second Class Honours degree in Engineering, Science, Applied Mathematics or related subjects.

Further information and application form (returnable by 2nd September 1985) may be obtained from Dr A.P. Boldy, Department of Engineering Science, University of Warwick, Coventry CV4 7AL. (0800 84011, Ext. 15105).

## The University of Liverpool

Department of Pure Mathematics

## SENIOR RESEARCH ASSISTANT

Applications are invited for a Senior Research Assistant to work with Dr R. Morton on the geometry of fibres, knots and links. A knowledge of knot theory, homomorphisms and 3-manifolds is necessary. Applicants should possess a Ph.D. in mathematics or expect to receive such a award in the near future. Applications from more experienced people would also be considered.

The post is ESRC funded, and tenable for up to two years starting on 1 October 1985 or as soon as possible thereafter. Salary in the range £7,550-£15,150 per annum.

Applications, together with the names of three referees, should be received not later than 30 September 1985, by the Registrar, The University, P.O. Box 147, Liverpool L69 3BX, from whom further particulars may be obtained.

## Independent Colleges

NEW ENGLAND COLLEGE  
ASSISTANT/ASSOCIATE PROFESSOR OF POLITICAL SCIENCE

The British Campus of New England College invites applications for the above position, with duties to begin 30 August 1985. A Ph.D. is preferred; however, other credentials will be considered. Duties include teaching four courses per semester, plus curriculum development and academic advising of students from 30 countries. Part-time appointment as Lecturer will also be considered.

Salary and fringe benefits are competitive, and will be determined on the basis of credentials and experience. The British Campus is a full four-year branch campus of an American college of New Hampshire, USA. Residential bachelors degree programs are offered in Business Administration, International Administration, Political Science, and English.

Letters of application, curriculum vitae, and names of three referees should be sent to: Dr. Eric C. Nummela, Director of the British Campus, New England College, Arundel, Sussex BN18 0DA. (020383)

## Administration

CNAA  
COUNCIL FOR NATIONAL ACADEMIC AWARDS  
ADMINISTRATIVE ASSISTANT TO THE CHIEF OFFICER'S OFFICE (THREE YEAR TERM)

Following restructuring within the Chief Officer's Office, the position of Administrative Assistant has now become available. The post-holder will be expected to act as Personal Assistant to the Chief Officer and provide administrative support relating to the range of work in the Chief Officer's Office. He/She will be responsible for co-ordinating administrative and secretarial support for the Chief Officer's Office.

Applicants should preferably be graduates with some experience of work in Higher Education, but other appropriate qualifications and experience will be considered.

Salary Scale: £8,586 p.a. - £13,137 p.a. including London Weighting. For further details, please contact:

The Personnel and Training Officer,  
The Council for National Academic Awards,  
344-354 Gray's Inn Road,  
London WC1R 8EP

The closing date for applications is 13th September, 1985. (102099)

CNAA  
COUNCIL FOR NATIONAL ACADEMIC AWARDS  
ADMINISTRATIVE ASSISTANTS (3 YEAR TERM)

Following Divisional restructuring within the CNAA a range of administrative assistant posts are now currently available in the following areas:

- |              |                                                            |
|--------------|------------------------------------------------------------|
| Division I   | Science and Technology                                     |
| Division II  | Arts/Humanities/Business and Social Studies                |
| Division III | Policy and Reviews Co-ordination/Interdisciplinary Studies |
| Division V   | Education/Art and Design                                   |

Applicants should preferably be graduates with some experience of work in Higher Education, but other appropriate qualifications and experience will be considered.

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The Council for National Academic Awards,  
344-354 Gray's Inn Road,  
London WC1R 8EP

The closing date for applications is 13th September 1985. (020000)

## Administration continued

The Wellcome Trust  
HEAD OF PUBLIC RELATIONS  
£25,000

The Wellcome Trust is a registered charity which was created by the will of Sir Henry Wellcome in 1938. Through the Trustees it distributes an income at present of £25m per annum for the advancement of research in human and veterinary medicine and the history of medicine.

As it enters its fiftieth year The Trust is now seeking to appoint a Head of Public Relations whose responsibility will be to ensure that its activities are better understood by a wider audience.

Reporting directly to The Trust's director, his/her responsibilities will include:

1. the planning and implementation of an annual public relations programme (both internal and external) in conjunction with The Trust's appointed communications advisers;
2. the co-ordination of all public relations activities;
3. the development of a good relationship with the press; the issuing of press releases; and the handling of all media related enquiries;
4. the supervision of the production of appropriate literature.

The successful candidate, likely to be aged between 40 and 55, should be able to write well on bio-medical subjects; to demonstrate initiative; and to articulate clearly and sensitively on The Trust's philosophy and objectives.

Although a background in the medical or academic world would be ideal, The Trust is open to applicants with a strong background in business, the Forces or the Civil Service.

To apply please write in confidence with a full CV and examples of written work giving details of age, experience, qualifications and present earnings to:

Dr Peter Williams, Director  
The Wellcome Trust  
1 Park Square West, London NW14 4J

## Overseas

## NATIONAL UNIVERSITY OF SINGAPORE

## RESEARCH SCHOLARSHIPS

Research Scholarships are available to outstanding university graduates registered in, or admissible to, master's and doctor's degree programmes by research at the National University of Singapore.

The Scholarships are tenable for one year in the first instance and, subject to satisfactory progress, renewable annually for another two years.

The value of each Scholarship ranges from \$3000 to \$5100 per month (£1 00 - \$53 10 approximately) and is not subject to income tax. The actual quantum is determined on the candidate's qualifications and experience. No travel or other allowance is provided.

Research Scholars may be asked to assist in the work of the Departments to which they are attached for not more than three hours a week. They will be remunerated for the work done.

The University will help Research Scholars find off-campus accommodation.

Application forms may be obtained from:

NUS Overseas Office  
5 Chesham Street  
London SW1  
United Kingdom



The Registrar  
NATIONAL UNIVERSITY OF SINGAPORE  
Kent Ridge, Singapore 0511  
Republic of Singapore

In your request for application forms, please state -

- (a) the field of research you intend to undertake;
- (b) your highest educational qualification.

Applications must be received by the Registrar, National University of Singapore by 31 October 1985.

## Overseas continued

## University of Kuwait Health Science Centre

## Teaching Appointments in The Faculty of Allied Health Sciences &amp; Nursing

Applications are invited for the following vacancies in the Faculty of Allied Health Sciences and Nursing. The Faculty offers University-based B.Sc. programmes, with practical training carried out in the hospitals of the Ministry of Public Health. The language of instruction is English.

1. CHAIRMEN (Professor or Associate Professor):  
Department of Medical Laboratory Technology  
Department of Health Information Technology  
Department of Physical Therapy  
Department of Radiologic Sciences  
Department of Nursing

The Chairman of the Department has responsibility for the administration, development of the department and its curricula, course of studies, teaching, research programmes, its faculty members and all other related activities. He/She bears all the responsibility for all decisions concerning the Department and will be its official representative at all times.

2. ACADEMIC & TECHNICAL STAFF:  
Associate Professors  
Assistant Professors  
Principal Clinical Instructors  
Senior Clinical Instructors

1. Medical Laboratory Technology specializing in Histology and Hematology and Blood Group Serology.

2. Health Information Administration.

3. Physical Therapy

4. Radiation Therapy

5. Diagnostic Radiography

6. Nuclear Medicine

7. Nursing

8. Compiles and Learning Resources

Applicants will participate in theoretical and practical teaching, and development and management of their respective programmes.

Appointments are tenable from 1st September 1985.

Requirements for Appointments:

1. Professors, Associate Professors and Assistant Professors

Applicants should possess a Ph.D. or equivalent qualification in their respective specialty and have conducted and published research in their field. Professors must have 14 years experience, including 4 years as an associate professor. Associate Professors must have at least 5 years experience since their B.Sc. including 4 years as an assistant professor.

Applicants in the U.K. should write for application forms to the Cultural Attaché, Embassy of the State of Kuwait, Queens Gate, London SW7 2HR. Applicants outside the U.K. should send applications in duplicate, including full Curriculum Vitae, 2 recent passport photographs and the names and addresses of three referees, to:

The Dean, Faculty of Allied Health Sciences and Nursing, Department Kuwait University Health Science Centre, P.O. Box 31470, Safat, Kuwait, to arrive no later than 30th November, 1985.

Equal opportunity in employment is College policy.

(020677)

MITCHELL  
COLLEGE OF ADVANCED EDUCATION

Mitchell College is a progressive tertiary institution, in a pleasant rural region 21km west of Sydney. It offers over 30 courses of study to approximately 5000 students, both internal and external. Excellent connections with the community and co-operating professional, government and non-statutory bodies encourage research and consulting activities.

Applications are invited for the position of

## LECTURER IN PSYCHOLOGY (Four Positions)

The School of Social Science and Welfare Studies offers a BA Social Science with Welfare Studies and Applied Science strands, an Associate Diploma in Justice Administration with Police and Corrective Services strands, an Associate Diploma in Vocational Rehabilitation and a Postgraduate Diploma in Counselling. All of these courses have strong psychology components and, in particular, the BA Social Science course includes an optional major in psychology. In addition, the School offers psychology units to students in the School of Nursing and Health Administration and the School of Communication and Liberal Studies. Plans for future developments include courses in Social Administration, Recreation and Sanitation Studies.

Applicants should have sound qualifications in basic areas of psychology, preferably including postgraduate awards, and have a deep interest in the applications of psychology in vocational settings, including the fields of business management and nursing. Applicants with skills in any major area of psychology will be considered, but preference will be given to those qualified to teach counselling (particular emphasis on teaching counselling skills, clinical learning, training (applied behaviour analysis), industrial or health psychology.

SALARY will depend on qualifications and experience:

Lecturer I AS30,706-AS34,467 per annum  
Lecturer II AS28,236-AS30,000 per annum  
Lecturer III AS22,614-AS25,905 per annum

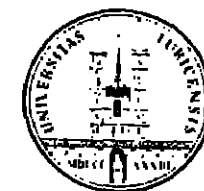
Further information is available from Dr. B. Galt, Dean of the School, telephone (063) 33 2574 or 33 2580.

Applications setting out personal data, telephone number, qualifications and experience, accompanied by the names and addresses of three (3) referees should be sent to:

The Registrar (Staff Appointments)  
Mitchell College of Advanced Education  
Belhurst NSW 2705 Australia

Applications close on Monday, 23rd September 1985. Equal opportunity in employment is College policy.

(020677)

UNIVERSITAET ZUERICH  
Mathematisches Institut

There is a vacancy from 12.10.1987 for a

## PROFESSOR IN GEOMETRY

(with emphasis towards Analysis), to complement the existing areas of teaching and research. Applicants should be expert in a field such as Differential Geometry, Differential Topology, Global or Harmonic Analysis, and younger candidates may receive preference.

Applications, with curriculum vitae and list of publications, should reach the Dekanat der Philosophischen Fakultät II, Universität Zürich, Rämistrasse 71, 8006 Zürich, Switzerland, before 31.10.1985. (020670)

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|         |                               |          | 29 Computer Studies (II)    |
|         |                               | DECEMBER | 6 Education (II)            |

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